

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
AKRON, OH												
CO	2nd max 8-hour	Down	1	5.7	3.3	4.1	3.1	5.3	3.3	3.4	3.2	2.6
O ₃	4th max 8-hour	NS	2	0.09	0.101	0.087	0.093	0.086	0.092	0.091	0.087	0.097
	2nd daily max 1-hour	NS	2	0.111	0.12	0.108	0.108	0.1	0.117	0.105	0.103	0.112
PM ₁₀	90th percentile	Down	1	49	51	44	49	51	48	35	39	39
	weighted annual mean	Down	1	25.9	28.4	27.1	25	27.6	26.1	24.7	23.8	23.8
SO ₂	arithmetic mean	Down	1	0.015	0.015	0.013	0.015	0.012	0.009	0.01	0.012	0.01
	2nd max 24-hour	NS	1	0.061	0.051	0.064	0.056	0.042	0.046	0.042	0.072	0.044
ALBANY-SCHENECTADY-TROY, NY												
CO	2nd max 8-hour	Down	1	6.2	5.4	4.7	3.8	5.2	4.3	3.7	4.5	4.4
Pb	max quarterly mean	Down	1	0.133	0.037	0.033	0.033	0.043	0.041	0.032	0.031	0.032
O ₃	4th max 8-hour	NS	3	0.084	0.084	0.086	0.081	0.077	0.079	0.074	0.079	0.075
	2nd daily max 1-hour	NS	3	0.105	0.099	0.098	0.099	0.1	0.101	0.094	0.097	0.096
PM ₁₀	90th percentile	NS	5	36.4	35.6	33.6	34.2	40	31.8	28.8	32	36
	weighted annual mean	NS	5	20.98	21.3	21.46	19.74	21.4	18.22	19.08	19.52	19.64
SO ₂	arithmetic mean	Down	1	0.006	0.007	0.006	0.006	0.006	0.005	0.005	0.004	0.003
	2nd max 24-hour	Down	1	0.028	0.03	0.022	0.026	0.027	0.016	0.021	0.017	0.013
ALBUQUERQUE, NM												
CO	2nd max 8-hour	Down	6	5.967	5.433	5.017	5.117	4.933	4.983	4.333	3.7	3.667
NO ₂	arithmetic mean	NS	1	0.018	0.004	0.021	0.024	0.023	0.018	0.022	0.019	0.016
O ₃	4th max 8-hour	NS	7	0.069	0.065	0.066	0.063	0.067	0.065	0.068	0.066	0.07
	2nd daily max 1-hour	NS	7	0.088	0.084	0.086	0.081	0.083	0.083	0.084	0.082	0.086
PM ₁₀	90th percentile	Down	8	38.875	37.125	33.75	35.5	35.5	39.375	37.5	32.625	32
	weighted annual mean	Down	8	23.95	22.488	22.788	23.45	22.25	23.75	23.925	20.788	20.575
ALEXANDRIA, LA												
PM ₁₀	90th percentile	Down	1	38	37	40	36	38	37	27	32	32
	weighted annual mean	NS	1	22.8	21.9	24.7	21.3	23.2	21.4	18.6	23.2	23.2
ALLENTOWN-BETHLEHEM-EASTON, PA												
CO	2nd max 8-hour	Down	1	5.8	6.5	3.9	3.5	4.7	4.8	3.2	2.7	2.9
Pb	max quarterly mean	Down	1	0.4	0.461	0.283	0.181	0.131	0.074	0.083	0.093	0.12
NO ₂	arithmetic mean	NS	1	0.017	0.018	0.018	0.02	0.021	0.018	0.018	0.016	0.015
O ₃	4th max 8-hour	NS	2	0.093	0.101	0.081	0.084	0.082	0.094	0.089	0.097	0.092
	2nd daily max 1-hour	NS	2	0.11	0.119	0.096	0.107	0.105	0.109	0.107	0.116	0.109
SO ₂	arithmetic mean	NS	2	0.008	0.008	0.007	0.006	0.008	0.006	0.006	0.009	0.009
	2nd max 24-hour	NS	2	0.037	0.037	0.032	0.029	0.047	0.027	0.028	0.029	0.032
ALTOONA, PA												
CO	2nd max 8-hour	NS	1	1.7	1.7	2.8	2	2.4	1.7	1.9	1.5	1.2
NO ₂	arithmetic mean	Down	1	0.015	0.015	0.014	0.015	0.015	0.013	0.013	0.014	0.013
O ₃	4th max 8-hour	NS	1	0.081	0.092	0.079	0.086	0.092	0.091	0.083	0.096	0.098
	2nd daily max 1-hour	up	1	0.097	0.106	0.095	0.1	0.106	0.112	0.101	0.114	0.114
SO ₂	arithmetic mean	Down	1	0.011	0.011	0.009	0.009	0.01	0.008	0.008	0.01	0.008
	2nd max 24-hour	Down	1	0.062	0.044	0.046	0.052	0.058	0.037	0.033	0.046	0.032
ANCHORAGE, AK												
PM ₁₀	90th percentile	Down	3	63.333	57.333	61.333	55.333	50.333	50.667	48	51.333	37.333
	weighted annual mean	Down	3	30.933	29.633	31.267	27.567	26.6	26.033	24.8	24.5	20.067
ANNISTON, AL												
PM ₁₀	90th percentile	NS	1	46	46	37	38	40	40	27	42	41
	weighted annual mean	NS	1	28	29.2	24.6	25	23.7	22.8	18.7	23.1	26
ASHEVILLE, NC												
O ₃	4th max 8-hour	up	1	0.073	0.063	0.064	0.066	0.069	0.076	0.074	0.075	0.09
	2nd daily max 1-hour	up	1	0.091	0.079	0.083	0.079	0.084	0.085	0.084	0.09	0.114
PM ₁₀	90th percentile	NS	1	41	41	40	43	30	28	29	38	36
	weighted annual mean	Down	1	25.1	24	22.8	22.3	19	18.4	18.8	20.7	20.1
ATLANTA, GA												
CO	2nd max 8-hour	Down	1	5.4	6.5	5.1	4.9	5.3	4.5	3.7	4.3	4.1
NO ₂	arithmetic mean	NS	2	0.021	0.02	0.02	0.02	0.018	0.017	0.021	0.02	0.021
O ₃	4th max 8-hour	NS	3	0.107	0.093	0.091	0.112	0.093	0.112	0.103	0.102	0.117
	2nd daily max 1-hour	NS	3	0.137	0.124	0.127	0.148	0.12	0.143	0.129	0.132	0.144
PM ₁₀	90th percentile	NS	3	68.333	53.333	45.667	47	43.333	45.333	41	48.667	49.667
	weighted annual mean	Down	3	38.9	32.067	28.067	28.567	26.867	28.267	26.8	27.967	28.067
SO ₂	arithmetic mean	Down	3	0.006	0.006	0.006	0.006	0.004	0.004	0.004	0.004	0.003
	2nd max 24-hour	Down	3	0.025	0.029	0.026	0.032	0.022	0.018	0.019	0.021	0.016
ATLANTIC-CAPE MAY, NJ												
O ₃	4th max 8-hour	NS	1	0.109	0.111	0.094	0.093	0.083	0.1	0.095	0.106	0.091
	2nd daily max 1-hour	NS	1	0.157	0.136	0.119	0.115	0.099	0.116	0.108	0.131	0.118
SO ₂	arithmetic mean	Down	1	0.004	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	2nd max 24-hour	NS	1	0.012	0.011	0.016	0.014	0.019	0.011	0.014	0.011	0.009
AUGUSTA-AIKEN, GA-SC												
Pb	max quarterly mean	Down	1	0.017	0.013	0.011	0.01	0.009	0.007	0.004	0.008	0.019
O ₃	4th max 8-hour	NS	3	0.085	0.072	0.074	0.084	0.08	0.079	0.083	0.084	0.096
	2nd daily max 1-hour	NS	3	0.103	0.095	0.09	0.101	0.093	0.1	0.099	0.105	0.116
PM ₁₀	90th percentile	NS	1	36	35	32	35	35	29	29	31	35
	weighted annual mean	NS	1	22.2	22.7	21.9	22.1	21.3	18.7	18.7	21.4	22.4
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	Down	1	0.009	0.01	0.009	0.009	0.008	0.009	0.007	0.008	0.007

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
AUSTIN-SAN MARCOS, TX													
O ₃	4th max 8-hour	NS	1	0.088	0.083	0.081	0.08	0.085	0.089	0.08	0.075	0.088	0.087
	2nd daily max 1-hour	NS	1	0.11	0.1	0.099	0.091	0.102	0.105	0.098	0.089	0.115	0.102
BAKERSFIELD, CA													
NO ₂	arithmetic mean	Down	4	0.017	0.017	0.016	0.015	0.015	0.013	0.013	0.013	0.014	
O ₃	4th max 8-hour	NS	5	0.103	0.105	0.099	0.105	0.104	0.109	0.113	0.096	0.114	0.105
	2nd daily max 1-hour	NS	5	0.13	0.13	0.122	0.128	0.13	0.13	0.138	0.118	0.134	0.122
PM ₁₀	90th percentile	Down	4	89.25	90.5	61.75	60	47.25	62	47	45	45.5	55.5
	weighted annual mean	Down	4	47.15	53.775	38.4	33.188	30.1	32.825	28.425	27.9	25.175	29.925
BALTIMORE, MD													
CO	2nd max 8-hour	Down	3	7.1	6.367	5.5	5.433	5.833	4.667	3.633	4.6	4.133	4.567
Pb	max quarterly mean	Down	1	0.058	0.036	0.043	0.035	0.032	0.029	0.027	0.005	0.005	0.005
NO ₂	arithmetic mean	Down	1	0.034	0.033	0.031	0.033	0.032	0.026	0.027	0.026	0.026	0.024
O ₃	4th max 8-hour	NS	7	0.098	0.108	0.092	0.106	0.096	0.104	0.091	0.105	0.098	0.106
	2nd daily max 1-hour	NS	7	0.126	0.136	0.117	0.132	0.128	0.137	0.119	0.137	0.123	0.138
PM ₁₀	90th percentile	Down	5	51.8	57.6	47	50.6	53.4	47.8	43.4	46.4	47.8	45
	weighted annual mean	Down	5	32.72	35.64	30.26	29.44	30.46	28.78	27.1	28.12	28.56	28.02
SO ₂	arithmetic mean	Down	2	0.008	0.009	0.009	0.008	0.009	0.006	0.007	0.008	0.007	0.007
	2nd max 24-hour	Down	2	0.03	0.03	0.027	0.026	0.03	0.022	0.026	0.025	0.021	0.02
BANGOR, ME													
PM ₁₀	90th percentile	NS	1	33	41	32	34	35	32	27	33	34	24
	weighted annual mean	Down	1	20.5	25.1	21.9	22.2	21.9	20	18.8	21.1	17.5	16.7
BATON ROUGE, LA													
Pb	max quarterly mean	NS	3	0.051	0.03	0.104	0.027	0.038	0.049	0.032	0.041	0.045	0.043
NO ₂	arithmetic mean	NS	2	0.01	0.01	0.01	0.01	0.011	0.01	0.01	0.01	0.01	0.01
O ₃	4th max 8-hour	NS	3	0.107	0.093	0.084	0.08	0.082	0.093	0.088	0.086	0.091	0.093
	2nd daily max 1-hour	NS	3	0.154	0.132	0.107	0.111	0.115	0.123	0.114	0.119	0.127	0.115
PM ₁₀	90th percentile	NS	2	42.5	48.5	37	34.5	40.5	37.5	34.5	43.5	45.25	47
	weighted annual mean	NS	2	28.15	27.6	26.7	22.2	26.3	24.35	24.45	27.35	29.025	30.7
SO ₂	arithmetic mean	NS	1	0.005	0.009	0.008	0.006	0.008	0.006	0.006	0.006	0.007	0.006
	2nd max 24-hour	NS	1	0.022	0.036	0.033	0.021	0.025	0.034	0.024	0.027	0.036	0.019
BEAUMONT-PORT ARTHUR, TX													
NO ₂	arithmetic mean	NS	2	0.009	0.01	0.011	0.009	0.01	0.01	0.01	0.01	0.008	0.01
O ₃	4th max 8-hour	NS	3	0.087	0.097	0.094	0.088	0.08	0.098	0.082	0.092	0.085	0.072
	2nd daily max 1-hour	NS	3	0.12	0.13	0.13	0.115	0.113	0.134	0.117	0.137	0.117	0.099
SO ₂	arithmetic mean	Down	2	0.009	0.008	0.006	0.006	0.006	0.005	0.005	0.006	0.005	0.005
	2nd max 24-hour	Down	2	0.042	0.059	0.044	0.047	0.039	0.025	0.041	0.037	0.033	0.032
BELLINGHAM, WA													
O ₃	4th max 8-hour	NS	1	0.061	0.058	0.056	0.058	0.059	0.054	0.062	0.052	0.056	0.05
	2nd daily max 1-hour	Down	1	0.082	0.073	0.069	0.08	0.082	0.079	0.078	0.07	0.07	0.062
SO ₂	arithmetic mean	NS	1	0.007	0.006	0.007	0.006	0.007	0.006	0.005	0.005	0.005	0.007
	2nd max 24-hour	Down	1	0.028	0.021	0.022	0.017	0.019	0.018	0.013	0.012	0.015	0.016
BERGEN-PASSAIC, NJ													
CO	2nd max 8-hour	Down	2	6.8	6.6	4.45	5.15	6.15	4.9	3.75	4.85	3.7	4.1
NO ₂	arithmetic mean	Down	1	0.031	0.031	0.03	0.029	0.031	0.029	0.028	0.028	0.028	0.028
O ₃	4th max 8-hour	NS	1	0.096	0.1	0.075	0.082	0.088	0.104	0.083	0.096	0.096	0.096
	2nd daily max 1-hour	NS	1	0.129	0.137	0.104	0.111	0.114	0.122	0.106	0.12	0.12	0.12
PM ₁₀	90th percentile	Down	3	59	61.667	50.333	51	57.333	49.333	47.667	48.833	46	44
	weighted annual mean	Down	3	36.933	39.333	32.967	31.167	35.167	30.633	30.533	31.183	28.5	26.9
SO ₂	arithmetic mean	Down	2	0.01	0.01	0.009	0.008	0.007	0.005	0.006	0.005	0.005	0.005
	2nd max 24-hour	Down	2	0.041	0.035	0.04	0.026	0.037	0.027	0.022	0.021	0.021	0.022
BILLINGS, MT													
SO ₂	arithmetic mean	Down	4	0.016	0.016	0.02	0.021	0.015	0.013	0.009	0.007	0.006	0.005
	2nd max 24-hour	Down	4	0.066	0.069	0.081	0.104	0.066	0.059	0.056	0.032	0.025	0.022
BILOXI-GULFPORT-PASCAGOULA, MS													
O ₃	4th max 8-hour	NS	1	0.079	0.079	0.087	0.076	0.093	0.087	0.076	0.078	0.089	0.091
	2nd daily max 1-hour	NS	1	0.115	0.115	0.108	0.098	0.117	0.111	0.104	0.092	0.108	0.107
SO ₂	arithmetic mean	Down	1	0.007	0.006	0.006	0.004	0.003	0.003	0.003	0.002	0.003	0.003
	2nd max 24-hour	NS	1	0.037	0.034	0.02	0.029	0.022	0.024	0.043	0.025	0.022	0.024
BIRMINGHAM, AL													
CO	2nd max 8-hour	Down	2	6.8	7	7.45	7.3	6.7	6.55	5.3	6	4.4	4.55
O ₃	4th max 8-hour	NS	6	0.093	0.075	0.083	0.082	0.077	0.096	0.093	0.083	0.097	0.09
	2nd daily max 1-hour	NS	6	0.119	0.1	0.108	0.11	0.097	0.125	0.128	0.11	0.121	0.121
PM ₁₀	90th percentile	Down	5	58.2	55.2	45.2	43.2	38.8	41.8	38.8	47.2	40.4	36.8
	weighted annual mean	Down	5	34.64	31.88	28.78	27.34	25.24	26.48	24.62	26.1	27.34	24.82
SO ₂	arithmetic mean	NS	1	0.008	0.007	0.007	0.009	0.007	0.006	0.004	0.006	0.007	0.007
	2nd max 24-hour	NS	1	0.025	0.02	0.027	0.05	0.037	0.016	0.015	0.018	0.032	0.026
BOISE CITY, ID													
PM ₁₀	90th percentile	Down	4	53.5	68	55.75	62	59.5	50	48.5	44.75	39.75	48.25
	weighted annual mean	Down	4	29.275	33.675	33.2	35.45	34.025	29.65	28.175	28.025	22.65	26.05

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
BOSTON, MA-NH													
CO	2nd max 8-hour	Down	4	5.6	4.05	4.725	3.95	4.85	3.55	3.6	3.775	2.875	3.425
NO ₂	arithmetic mean	Down	3	0.029	0.031	0.029	0.03	0.03	0.027	0.028	0.026	0.027	0.026
O ₃	4th max 8-hour	NS	4	0.08	0.093	0.088	0.085	0.084	0.086	0.073	0.082	0.085	0.083
	2nd daily max 1-hour	NS	4	0.101	0.126	0.109	0.113	0.109	0.108	0.092	0.102	0.101	0.102
PM ₁₀	90th percentile	NS	8	41.375	40	36.125	36	39.25	35.125	40.25	34.75	41.875	38.375
	weighted annual mean	NS	8	25.913	24.775	22.775	22.325	23.05	21.938	23.625	22.013	24.413	24.2
SO ₂	arithmetic mean	Down	10	0.009	0.009	0.009	0.009	0.008	0.006	0.006	0.006	0.006	0.006
	2nd max 24-hour	Down	10	0.038	0.03	0.037	0.031	0.032	0.024	0.025	0.03	0.023	0.025
BOULDER-LONGMONT, CO													
CO	2nd max 8-hour	Down	2	5.7	5.7	5.85	5.25	4.45	4.2	4	4.35	3.4	2.9
O ₃	4th max 8-hour	NS	1	0.074	0.077	0.07	0.073	0.071	0.072	0.072	0.071	0.08	0.08
	2nd daily max 1-hour	NS	1	0.096	0.102	0.092	0.096	0.091	0.095	0.092	0.092	0.1	0.1
PM ₁₀	90th percentile	Down	2	39	43.5	34.5	43.5	28.5	27	27	24	26	26.5
	weighted annual mean	Down	2	22.9	23.2	22.6	24.25	18.95	16.2	17.2	16.6	16.9	18.15
BRAZORIA, TX													
O ₃	4th max 8-hour	NS	1	0.1	0.091	0.097	0.092	0.085	0.113	0.079	0.085	0.09	0.112
	2nd daily max 1-hour	NS	1	0.15	0.13	0.129	0.132	0.112	0.148	0.11	0.137	0.111	0.161
BREMERTON, WA													
PM ₁₀	90th percentile	Down	1	41	41	41	47	36	33	24	27	21	23
	weighted annual mean	Down	1	22.6	22.6	22.6	23.4	19.7	20.6	16.9	17.3	12.9	15
BRIDGEPORT, CT													
CO	2nd max 8-hour	Down	1	5	5.5	4.7	3.7	5.8	4.9	3	4	2.8	3.2
NO ₂	arithmetic mean	Down	1	0.026	0.025	0.024	0.024	0.026	0.024	0.024	0.023	0.023	0.023
O ₃	4th max 8-hour	NS	2	0.098	0.108	0.084	0.098	0.088	0.101	0.088	0.096	0.093	0.093
	2nd daily max 1-hour	NS	2	0.145	0.147	0.119	0.157	0.152	0.131	0.114	0.132	0.132	0.135
PM ₁₀	90th percentile	Down	1	41	49	37	43	44	37	32	34	33	30
	weighted annual mean	Down	1	25.2	27.7	22.4	20.8	25.7	21.8	20.6	21.4	20.8	19.4
SO ₂	arithmetic mean	Down	1	0.013	0.012	0.011	0.01	0.01	0.007	0.006	0.007	0.007	0.006
	2nd max 24-hour	Down	1	0.05	0.044	0.04	0.035	0.049	0.028	0.023	0.031	0.024	0.023
BROWNSVILLE-HARLINGEN-SAN BENITO, TX													
PM ₁₀	90th percentile	NS	1	36	36	36	45	36	35	28	36	36	36
	weighted annual mean	Down	1	21.7	23.9	23.7	22.4	22.5	21.4	18.9	20.6	20.6	20.6
BUFFALO-NIAGARA FALLS, NY													
CO	2nd max 8-hour	Down	3	3.367	3.1	4.633	3.433	3.2	2.567	2.933	2.167	2.167	1.833
Pb	max quarterly mean	NS	1	0.029	0.031	0.034	0.047	0.046	0.033	0.034	0.042	0.036	0.036
NO ₂	arithmetic mean	NS	2	0.02	0.018	0.018	0.017	0.019	0.019	0.019	0.018	0.017	0.019
O ₃	4th max 8-hour	NS	2	0.089	0.094	0.08	0.077	0.082	0.088	0.077	0.077	0.092	0.089
	2nd daily max 1-hour	NS	2	0.106	0.106	0.109	0.089	0.092	0.103	0.095	0.091	0.106	0.101
PM ₁₀	90th percentile	NS	11	35.364	49	33.364	34.545	34	34.364	29	33.909	38.364	38.364
	weighted annual mean	NS	11	19.391	24.845	21.236	19.145	18.664	18.364	19.127	18.7	19.845	19.845
SO ₂	arithmetic mean	Down	4	0.011	0.012	0.011	0.01	0.01	0.008	0.007	0.007	0.007	0.007
	2nd max 24-hour	Down	4	0.054	0.062	0.058	0.042	0.039	0.04	0.035	0.041	0.029	0.03
BURLINGTON, VT													
CO	2nd max 8-hour	Down	1	4.6	3.8	3.9	3.9	3.9	2.5	3.3	2	2.4	1.5
NO ₂	arithmetic mean	NS	1	0.018	0.017	0.016	0.017	0.017	0.017	0.017	0.017	0.018	0.017
PM ₁₀	90th percentile	Down	2	37.5	36.5	38.5	36	34.5	34.5	29	29.5	29.5	29.5
	weighted annual mean	Down	2	24.25	23.2	22.7	20.5	21.1	20.1	20.3	20.5	20.6	20.6
SO ₂	arithmetic mean	Down	1	0.008	0.008	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	Down	1	0.021	0.022	0.013	0.011	0.013	0.006	0.014	0.012	0.008	0.008
CANTON-MASSILLION, OH													
O ₃	4th max 8-hour	NS	4	0.086	0.089	0.081	0.091	0.084	0.091	0.086	0.083	0.096	0.09
	2nd daily max 1-hour	NS	4	0.103	0.106	0.094	0.105	0.097	0.11	0.096	0.097	0.113	0.104
PM ₁₀	90th percentile	Down	2	52	50	45	45	50	51.5	35.5	44	43	36
	weighted annual mean	Down	2	29.55	31.2	27.65	26.25	28.45	28.75	25	25.6	25.05	23.45
SO ₂	arithmetic mean	Down	1	0.011	0.01	0.01	0.01	0.009	0.006	0.006	0.007	0.007	0.007
	2nd max 24-hour	Down	1	0.036	0.037	0.04	0.046	0.052	0.033	0.032	0.025	0.029	0.028
CASPER, WY													
PM ₁₀	90th percentile	Down	1	38	38	38	27	34	32	33	29	31	29
	weighted annual mean	NS	1	21.3	21.3	21.3	17.7	17.3	19.4	19.1	15.7	17.2	19.7
CEDAR RAPIDS, IA													
CO	2nd max 8-hour	NS	1	3.5	4.1	4.9	3.2	4.2	2.6	7.8	2.4	2.5	2
O ₃	4th max 8-hour	NS	1	0.054	0.065	0.071	0.058	0.063	0.065	0.061	0.06	0.059	0.059
	2nd daily max 1-hour	NS	1	0.065	0.081	0.081	0.067	0.07	0.075	0.073	0.071	0.068	0.068
PM ₁₀	90th percentile	NS	2	41.5	43.5	43.5	34	34	39	36	40.5	39.5	30.5
	weighted annual mean	NS	2	27.3	28.45	26.1	21.55	22.8	23.55	23.55	24.25	25.35	22.2
SO ₂	arithmetic mean	NS	2	0.004	0.004	0.005	0.003	0.003	0.003	0.002	0.003	0.003	0.003
	2nd max 24-hour	Down	2	0.031	0.025	0.024	0.017	0.016	0.013	0.011	0.012	0.01	0.016

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
CHAMPAIGN-URBANA, IL													
O ₃	4th max 8-hour	up	1	0.076	0.072	0.071	0.066	0.083	0.084	0.085	0.076	0.083	0.094
	2nd daily max 1-hour	up	1	0.087	0.08	0.085	0.074	0.094	0.095	0.094	0.088	0.105	0.108
PM ₁₀	90th percentile	Down	1	46	47	47	41	44	44	31	35	39	35
	weighted annual mean	NS	1	28.2	30.4	31.4	22	24.9	22.3	19.2	22.5	24.3	22.7
SO ₂	arithmetic mean	Down	1	0.004	0.005	0.004	0.004	0.004	0.003	0.003	0.004	0.003	0.002
	2nd max 24-hour	NS	1	0.03	0.038	0.018	0.015	0.024	0.011	0.013	0.018	0.019	0.01
CHARLESTON-NORTH CHARLESTON, SC													
CO	2nd max 8-hour	NS	1	4.7	4.9	5.2	5.8	4	6.4	4.7	3.9	2.9	4
Pb	max quarterly mean	NS	1	0.039	0.039	0.01	0.007	0.012	0.01	0.01	0.011	0.026	0.008
NO ₂	arithmetic mean	Down	2	0.008	0.008	0.008	0.008	0.007	0.007	0.007	0.007	0.007	0.007
O ₃	4th max 8-hour	up	3	0.071	0.068	0.071	0.075	0.073	0.071	0.074	0.072	0.08	0.082
	2nd daily max 1-hour	NS	3	0.089	0.085	0.09	0.1	0.088	0.089	0.097	0.089	0.097	0.099
PM ₁₀	90th percentile	Down	4	44	40	35.5	35.75	33.5	29	29.5	29.25	36.75	30
	weighted annual mean	Down	4	20.175	18.5	17.05	16.1	15.35	13.875	14.2	14.375	15.425	14.25
SO ₂	arithmetic mean	Down	2	0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	Down	2	0.016	0.017	0.021	0.014	0.021	0.012	0.014	0.014	0.01	0.009
CHARLESTON, WV													
CO	2nd max 8-hour	Down	1	2.8	3.05	3.3	2.2	3.5	2.4	2.3	1.9	2	2
Pb	max quarterly mean	Down	3	0.035	0.022	0.027	0.018	0.026	0.02	0.016	0.01	0.01	0.01
O ₃	4th max 8-hour	NS	1	0.079	0.09	0.055	0.063	0.075	0.091	0.078	0.075	0.091	0.104
	2nd daily max 1-hour	NS	1	0.118	0.119	0.067	0.075	0.099	0.111	0.104	0.103	0.115	0.13
PM ₁₀	90th percentile	Down	1	58	47	44	52	49	40	41	32	35	37
	weighted annual mean	Down	1	36	29.3	27.6	29.2	28.1	26	24	21.1	21.4	21.9
SO ₂	arithmetic mean	NS	2	0.012	0.009	0.009	0.009	0.01	0.007	0.008	0.009	0.009	0.009
	2nd max 24-hour	NS	2	0.056	0.036	0.032	0.034	0.037	0.023	0.031	0.031	0.031	0.036
CHARLOTTE-GASTONIA-ROCK HILL, NC-SC													
CO	2nd max 8-hour	Down	5	7.06	6.3	6	5.56	5.78	4.68	4.36	4.84	4.2	3.82
Pb	max quarterly mean	NS	1	0.038	0.014	0.077	0.015	0.032	0.012	0.009	0.007	0.021	0.019
NO ₂	arithmetic mean	NS	1	0.017	0.016	0.016	0.017	0.016	0.016	0.016	0.018	0.018	0.018
O ₃	4th max 8-hour	up	3	0.095	0.091	0.085	0.097	0.089	0.092	0.099	0.1	0.105	0.102
	2nd daily max 1-hour	NS	3	0.117	0.115	0.104	0.13	0.111	0.113	0.126	0.117	0.13	0.125
PM ₁₀	90th percentile	NS	4	47.75	47.5	46	41	42	40	41.5	41.75	47	42.25
	weighted annual mean	Down	4	31.3	29.875	29.375	27.35	27.875	26.425	28.225	27.4	28.125	26.775
CHARLOTTESVILLE, VA													
PM ₁₀	90th percentile	NS	1	44	47	32	40	33	41	35	36	33	32
	weighted annual mean	Down	1	26.9	28.4	21.6	23.7	21.5	22.5	21.3	20.9	22.7	19.9
CHATTANOOGA, TN-GA													
O ₃	4th max 8-hour	NS	2	0.092	0.08	0.079	0.088	0.088	0.09	0.088	0.088	0.1	0.096
	2nd daily max 1-hour	NS	2	0.116	0.098	0.094	0.104	0.114	0.108	0.113	0.107	0.129	0.117
PM ₁₀	90th percentile	Down	2	61	63	51.5	51.5	50.5	49	52.5	45	45	42.5
	weighted annual mean	Down	2	37.85	37.65	34.45	31.75	32.7	32.05	32.3	27.2	27.95	27.85
CHEYENNE, WY													
PM ₁₀	90th percentile	Down	1	30	30	25	24	28	26	25	20	22	23
	weighted annual mean	Down	1	19.4	19.4	16.6	15.5	17.8	14.6	15.1	12.9	13.9	14.9
CHICAGO, IL													
CO	2nd max 8-hour	Down	6	4.817	4.183	4.533	4.85	6.283	3.633	3.383	3.45	3.55	3.417
Pb	max quarterly mean	Down	9	0.072	0.056	0.065	0.063	0.054	0.054	0.044	0.04	0.04	0.034
NO ₂	arithmetic mean	NS	5	0.022	0.022	0.025	0.026	0.028	0.028	0.028	0.028	0.027	0.027
O ₃	4th max 8-hour	NS	17	0.071	0.084	0.075	0.068	0.075	0.088	0.076	0.079	0.074	0.083
	2nd daily max 1-hour	NS	17	0.092	0.113	0.102	0.085	0.097	0.114	0.095	0.098	0.094	0.098
PM ₁₀	90th percentile	NS	13	60.154	50.538	53.538	50.846	56.231	55.308	45.077	45.769	50.308	51.615
	weighted annual mean	NS	13	35.1	32.777	32.577	31.238	35.123	32.315	29.6	29.631	32.554	32.077
SO ₂	arithmetic mean	Down	9	0.007	0.009	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.006
	2nd max 24-hour	NS	9	0.039	0.042	0.029	0.032	0.033	0.024	0.022	0.024	0.025	0.027
CHICO-PARADISE, CA													
CO	2nd max 8-hour	NS	1	3.9	5.6	4.6	3.9	4.1	3.5	3.4	3.5	3.8	4
NO ₂	arithmetic mean	NS	1	0.015	0.016	0.016	0.016	0.015	0.014	0.013	0.013	0.013	0.015
O ₃	4th max 8-hour	NS	1	0.078	0.073	0.077	0.076	0.082	0.076	0.074	0.066	0.078	0.087
	2nd daily max 1-hour	NS	1	0.12	0.09	0.09	0.09	0.097	0.091	0.096	0.074	0.103	0.11
PM ₁₀	90th percentile	Down	1	67	67	67	60	55	52	40	40	37	50
	weighted annual mean	NS	1	28	28	28	27.2	33.3	26.3	25	25.9	22.3	28.6
CINCINNATI, OH-KY-IN													
CO	2nd max 8-hour	Down	3	4.233	4.2	4.467	4.667	4.267	3.4	2.933	2.733	3.167	2.633
NO ₂	arithmetic mean	NS	2	0.022	0.022	0.021	0.022	0.022	0.021	0.022	0.023	0.022	0.019
O ₃	4th max 8-hour	NS	6	0.088	0.092	0.074	0.081	0.091	0.093	0.088	0.085	0.088	0.089
	2nd daily max 1-hour	NS	6	0.107	0.112	0.09	0.102	0.112	0.114	0.107	0.11	0.114	0.108
PM ₁₀	90th percentile	Down	7	64	57.143	49	58.286	50.714	54.429	42.429	49.286	46.357	43.714
	weighted annual mean	Down	7	36.043	32.086	30.129	30.543	30.4	31.3	27.914	28.886	28.236	26.671
SO ₂	arithmetic mean	Down	4	0.012	0.012	0.011	0.011	0.009	0.006	0.009	0.009	0.009	0.008
	2nd max 24-hour	Down	4	0.054	0.044	0.045	0.044	0.044	0.025	0.035	0.037	0.038	0.033

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
CLARKSVILLE-HOPKINSVILLE, TN-KY												
SO ₂	arithmetic mean	NS	1	0.007	0.006	0.009	0.01	0.007	0.006	0.006	0.005	0.006
	2nd max 24-hour	Down	1	0.038	0.029	0.036	0.058	0.037	0.019	0.023	0.026	0.02
CLEVELAND-LORAIN-ELYRIA, OH												
CO	2nd max 8-hour	NS	3	5.3	5.433	5.5	4.267	6.767	6.033	5.867	4.667	4.5
O ₃	4th max 8-hour	NS	6	0.084	0.09	0.083	0.088	0.085	0.09	0.088	0.085	0.093
	2nd daily max 1-hour	NS	6	0.105	0.111	0.103	0.106	0.105	0.108	0.106	0.101	0.113
PM ₁₀	90th percentile	NS	10	54	57.3	48.2	50.9	52	53.4	44.5	46	48
	weighted annual mean	NS	10	32.09	33.17	29.25	27.97	32.31	31.09	29.24	28.72	30.04
SO ₂	arithmetic mean	Down	8	0.01	0.01	0.009	0.009	0.008	0.006	0.007	0.006	0.006
	2nd max 24-hour	NS	8	0.041	0.04	0.039	0.041	0.043	0.025	0.03	0.03	0.027
COLORADO SPRINGS, CO												
CO	2nd max 8-hour	Down	4	5.2	4.825	4.4	4.1	3.625	4.05	3.625	3.8	3.125
Pb	max quarterly mean	Down	1	0.027	0.026	0.016	0.015	0.016	0.012	0.007	0.007	0.012
NO ₂	arithmetic mean	NS	3	0.016	0.016	0.016	0.015	0.017	0.017	0.016	0.015	0.014
O ₃	4th max 8-hour	Down	1	0.06	0.065	0.059	0.055	0.055	0.056	0.059	0.054	0.054
	2nd daily max 1-hour	Down	1	0.073	0.081	0.068	0.064	0.066	0.07	0.072	0.063	0.063
PM ₁₀	90th percentile	Down	9	34.667	39.444	33	36.222	34	31	30.889	28.222	31
	weighted annual mean	Down	9	22.056	24.322	21.722	22.056	20.678	19	19.211	18.022	19.322
SO ₂	arithmetic mean	NS	3	0.003	0.003	0.004	0.003	0.004	0.004	0.003	0.003	0.003
	2nd max 24-hour	NS	3	0.011	0.011	0.013	0.011	0.018	0.015	0.01	0.007	0.009
COLUMBIA, SC												
CO	2nd max 8-hour	Down	1	5.8	6	6.3	5.6	4.7	4	3.4	2.9	3.7
Pb	max quarterly mean	Down	3	0.034	0.043	0.031	0.017	0.015	0.011	0.01	0.009	0.011
NO ₂	arithmetic mean	NS	1	0.013	0.009	0.011	0.013	0.011	0.013	0.013	0.011	0.014
O ₃	4th max 8-hour	NS	3	0.092	0.071	0.075	0.082	0.077	0.079	0.077	0.078	0.091
	2nd daily max 1-hour	NS	3	0.114	0.095	0.095	0.106	0.095	0.101	0.095	0.101	0.112
PM ₁₀	90th percentile	Down	7	57.143	55.571	51.286	50.571	46.786	43.286	42.714	46.143	52.429
	weighted annual mean	Down	7	21.571	19.157	20.071	18.7	17.5	14.014	15.829	16.343	17.286
SO ₂	arithmetic mean	NS	4	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003
	2nd max 24-hour	NS	4	0.012	0.013	0.013	0.011	0.011	0.008	0.013	0.012	0.011
COLUMBUS, GA-AL												
O ₃	4th max 8-hour	up	2	0.073	0.07	0.079	0.077	0.076	0.085	0.082	0.081	0.09
	2nd daily max 1-hour	up	2	0.099	0.093	0.095	0.096	0.101	0.106	0.094	0.096	0.111
PM ₁₀	90th percentile	NS	1	46	40	43	37	44	44	33	39	45
	weighted annual mean	NS	1	28.6	26.9	25.8	25.4	26.5	28.2	22.2	26.4	30.1
COLUMBUS, OH												
CO	2nd max 8-hour	Down	3	4.133	4.767	4.933	3.933	4.467	3.833	2.467	2.433	3
O ₃	4th max 8-hour	NS	3	0.087	0.095	0.079	0.084	0.087	0.089	0.09	0.087	0.095
	2nd daily max 1-hour	NS	3	0.112	0.114	0.093	0.1	0.102	0.11	0.107	0.101	0.111
PM ₁₀	90th percentile	NS	2	57.5	52.5	43.5	48	46.5	51.5	36	52	51
	weighted annual mean	NS	2	30.7	29.65	26.15	26.65	26.65	29.15	24.45	27.35	30.25
SO ₂	arithmetic mean	Down	1	0.008	0.007	0.006	0.007	0.007	0.004	0.004	0.004	0.005
	2nd max 24-hour	Down	1	0.038	0.033	0.03	0.034	0.041	0.019	0.021	0.025	0.019
CORPUS CHRISTI, TX												
O ₃	4th max 8-hour	NS	2	0.081	0.073	0.079	0.081	0.079	0.089	0.08	0.074	0.079
	2nd daily max 1-hour	NS	2	0.1	0.105	0.094	0.116	0.106	0.119	0.101	0.092	0.102
PM ₁₀	90th percentile	NS	1	43	45	41	51	48	47	37	50	50
	weighted annual mean	NS	1	29.8	32.9	29.9	30.6	31.3	31.1	25.1	30.5	30.5
SO ₂	arithmetic mean	NS	2	0.002	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	NS	2	0.013	0.027	0.018	0.024	0.012	0.016	0.013	0.012	0.017
CUMBERLAND, MD-WV												
SO ₂	arithmetic mean	NS	1	0.01	0.009	0.006	0.008	0.01	0.005	0.003	0.006	0.006
	2nd max 24-hour	NS	1	0.031	0.028	0.024	0.027	0.037	0.015	0.019	0.02	0.02
DALLAS, TX												
CO	2nd max 8-hour	NS	1	4.7	3.8	5.6	5.4	5.3	5.9	5.5	3.7	2.7
Pb	max quarterly mean	Down	9	0.215	0.163	0.178	0.187	0.114	0.129	0.08	0.07	0.075
NO ₂	arithmetic mean	up	1	0.012	0.013	0.015	0.014	0.016	0.019	0.019	0.018	0.016
O ₃	4th max 8-hour	NS	3	0.095	0.071	0.089	0.096	0.092	0.109	0.094	0.093	0.102
	2nd daily max 1-hour	NS	3	0.137	0.11	0.124	0.129	0.118	0.137	0.115	0.124	0.114
PM ₁₀	90th percentile	NS	5	43.2	39.4	39.8	41	41.2	48.8	49.4	41.4	41.4
	weighted annual mean	NS	5	27.88	26.12	26.26	26.88	26.24	30.3	30.12	26.3	26.3
DANBURY, CT												
O ₃	4th max 8-hour	NS	1	0.105	0.101	0.082	0.096	0.093	0.093	0.081	0.105	0.092
	2nd daily max 1-hour	NS	1	0.149	0.136	0.121	0.14	0.125	0.134	0.11	0.138	0.115
PM ₁₀	90th percentile	Down	1	38	44	38	40	37	34	36	35	30
	weighted annual mean	Down	1	22.1	25.6	22.4	18.9	26	22	21.6	21.3	20.2
SO ₂	arithmetic mean	Down	1	0.007	0.008	0.007	0.006	0.006	0.004	0.005	0.005	0.004
	2nd max 24-hour	Down	1	0.033	0.032	0.027	0.024	0.037	0.02	0.02	0.024	0.02

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
DAVENPORT-MOLINE-ROCK ISLAND, IA-IL												
Pb	max quarterly mean	NS	1	0.031	0.013	0.019	0.016	0.015	0.013	0.019	0.015	0.014
O ₃	4th max 8-hour	NS	2	0.067	0.08	0.076	0.067	0.073	0.077	0.076	0.069	0.072
	2nd daily max 1-hour	NS	2	0.084	0.092	0.096	0.082	0.087	0.093	0.086	0.084	0.092
PM ₁₀	90th percentile	NS	5	59.4	55.4	59.8	50.6	59.333	63.867	58.2	57.2	58
	weighted annual mean	NS	5	35.26	34.48	33.68	30.76	36.867	38.553	33.92	33.84	33.32
SO ₂	arithmetic mean	Down	3	0.005	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003
	2nd max 24-hour	Down	3	0.022	0.02	0.019	0.018	0.023	0.017	0.016	0.015	0.013
DAYTON-SPRINGFIELD, OH												
CO	2nd max 8-hour	Down	2	3.2	3.45	3.6	3.55	3.35	2.95	2.35	2.95	2.8
O ₃	4th max 8-hour	NS	3	0.091	0.094	0.077	0.087	0.091	0.091	0.097	0.089	0.096
	2nd daily max 1-hour	NS	3	0.114	0.111	0.097	0.109	0.114	0.116	0.113	0.107	0.117
PM ₁₀	90th percentile	NS	3	47.667	43.333	41	45.667	39.667	43.667	38	41	42.333
	weighted annual mean	Down	3	26.033	28.2	25.233	24.6	24.433	25.633	22.733	24	24.633
SO ₂	arithmetic mean	NS	2	0.006	0.005	0.005	0.006	0.006	0.004	0.005	0.005	0.005
	2nd max 24-hour	NS	2	0.023	0.022	0.02	0.032	0.032	0.016	0.027	0.027	0.019
DAYTON BEACH, FL												
O ₃	4th max 8-hour	NS	2	0.073	0.073	0.073	0.074	0.072	0.068	0.066	0.072	0.079
	2nd daily max 1-hour	NS	2	0.082	0.082	0.082	0.094	0.084	0.083	0.079	0.086	0.094
PM ₁₀	90th percentile	NS	1	29	29	29	32	28	34	28	28	30
	weighted annual mean	NS	1	19.2	19.2	19.2	19.6	20.2	20.9	20.2	19.3	20
DECATUR, AL												
O ₃	4th max 8-hour	up	1	0.069	0.069	0.069	0.08	0.077	0.083	0.086	0.076	0.085
	2nd daily max 1-hour	up	1	0.08	0.08	0.08	0.091	0.092	0.098	0.096	0.09	0.102
PM ₁₀	90th percentile	NS	1	42	54	41	44	35	40	32	41	41
	weighted annual mean	NS	1	24.7	28.1	24.9	24.8	22.4	25	20.5	22.5	24.5
DECATUR, IL												
Pb	max quarterly mean	NS	1	0.026	0.031	0.03	0.026	0.046	0.028	0.023	0.027	0.024
O ₃	4th max 8-hour	NS	1	0.076	0.087	0.078	0.065	0.079	0.08	0.094	0.077	0.078
	2nd daily max 1-hour	NS	1	0.088	0.095	0.086	0.077	0.095	0.097	0.1	0.087	0.094
PM ₁₀	90th percentile	NS	1	56	54	63	46	53	56	43	41	49
	weighted annual mean	NS	1	33.9	36.3	38.4	27.5	28.9	29.5	27.9	27.1	31.5
SO ₂	arithmetic mean	NS	1	0.008	0.007	0.005	0.006	0.007	0.005	0.005	0.006	0.005
	2nd max 24-hour	Down	1	0.06	0.039	0.023	0.025	0.03	0.024	0.022	0.021	0.02
DENVER, CO												
CO	2nd max 8-hour	Down	6	7.217	7	8.3	6.6	6.1	5.567	4.833	4.733	3.883
Pb	max quarterly mean	Down	4	0.072	0.07	0.071	0.074	0.048	0.048	0.037	0.024	0.045
NO ₂	arithmetic mean	NS	1	0.024	0.024	0.024	0.021	0.028	0.023	0.022	0.023	0.02
O ₃	4th max 8-hour	NS	6	0.072	0.072	0.068	0.067	0.069	0.067	0.07	0.067	0.069
	2nd daily max 1-hour	NS	6	0.101	0.094	0.092	0.087	0.09	0.09	0.092	0.086	0.1
PM ₁₀	90th percentile	Down	12	44.333	46.667	41.167	52.667	43.417	35.583	35.833	39.833	38.833
	weighted annual mean	NS	12	23.35	23.833	23.575	25.858	22.183	19.025	19.783	20.242	20.292
SO ₂	arithmetic mean	Down	2	0.006	0.006	0.007	0.006	0.006	0.004	0.005	0.005	0.004
	2nd max 24-hour	NS	2	0.02	0.026	0.038	0.025	0.025	0.016	0.02	0.021	0.018
DES MOINES, IA												
CO	2nd max 8-hour	NS	3	4.567	4.6	3.933	4.533	3.933	3.967	3.2	2.967	5.733
O ₃	4th max 8-hour	NS	1	0.037	0.033	0.071	0.041	0.052	0.071	0.064	0.063	0.056
	2nd daily max 1-hour	NS	1	0.06	0.048	0.079	0.08	0.073	0.081	0.082	0.075	0.065
PM ₁₀	90th percentile	NS	3	56	48	55.333	49	52.333	54	53	58.667	44.667
	weighted annual mean	NS	3	32.133	28.533	28	28.7	30.067	29.867	31.3	32.133	25.967
DETROIT, MI												
CO	2nd max 8-hour	Down	5	4.12	4.5	4.08	4.26	5.8	4.3	3.74	3.04	2.98
NO ₂	arithmetic mean	NS	2	0.021	0.02	0.02	0.021	0.022	0.02	0.021	0.02	0.021
O ₃	4th max 8-hour	NS	8	0.084	0.094	0.078	0.079	0.089	0.087	0.084	0.084	0.089
	2nd daily max 1-hour	NS	8	0.101	0.119	0.098	0.104	0.124	0.117	0.1	0.108	0.11
PM ₁₀	90th percentile	NS	6	64.167	59	46.5	55.333	60.667	58.833	49.5	45	53.52.167
	weighted annual mean	NS	6	36.333	33.467	28.15	32.8	37.65	34.517	30.933	27.733	29.467
SO ₂	arithmetic mean	Down	10	0.01	0.008	0.007	0.007	0.007	0.006	0.006	0.006	0.006
	2nd max 24-hour	NS	10	0.038	0.033	0.03	0.03	0.032	0.03	0.034	0.028	0.032
DOOTHAN, AL												
PM ₁₀	90th percentile	NS	1	64	44	43	52	47	46	36	45	41
	weighted annual mean	NS	1	30.6	27.6	24.7	26.4	27.8	28.1	22.3	24.9	27.3
DULUTH-SUPERIOR, MN-WI												
CO	2nd max 8-hour	NS	1	4.4	5.2	4	4.1	4.3	4.5	4.5	3.2	3.7
PM ₁₀	90th percentile	Down	6	40.833	37.167	33.667	31.5	30.5	32	31.5	30.833	30.333
	weighted annual mean	NS	6	22.433	23.133	20.417	18.9	18.733	18.817	19.117	18.483	19.65
DUTCHES COUNTY, NY												
O ₃	4th max 8-hour	NS	1	0.101	0.101	0.092	0.099	0.087	0.093	0.089	0.089	0.093
	2nd daily max 1-hour	NS	1	0.126	0.126	0.112	0.139	0.117	0.115	0.109	0.111	0.108

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
EL PASO, TX												
CO	2nd max 8-hour	Down	6	10.033	8.55	7.533	7.383	6.167	6.3	7.767	6.35	6.083
Pb	max quarterly mean	Down	4	0.267	0.274	0.187	0.179	0.117	0.135	0.203	0.092	0.112
NO ₂	arithmetic mean	NS	2	0.022	0.023	0.026	0.026	0.029	0.029	0.027	0.025	0.023
O ₃	4th max 8-hour	NS	4	0.076	0.068	0.073	0.068	0.081	0.078	0.078	0.07	0.077
	2nd daily max 1-hour	Down	4	0.121	0.119	0.119	0.108	0.127	0.117	0.118	0.113	0.11
PM ₁₀	90th percentile	NS	8	62.625	52.75	49.75	42.875	47.375	50.75	50.5	44.875	44.25
	weighted annual mean	NS	8	32.475	27.8	27.725	24.488	24.863	27.813	26.588	22.775	23.45
SO ₂	arithmetic mean	Down	2	0.011	0.009	0.012	0.009	0.007	0.008	0.008	0.007	0.006
	2nd max 24-hour	Down	2	0.057	0.047	0.055	0.056	0.028	0.044	0.035	0.026	0.022
ELKHART-GOSHEN, IN												
O ₃	4th max 8-hour	NS	1	0.078	0.078	0.078	0.078	0.083	0.09	0.091	0.089	0.082
	2nd daily max 1-hour	NS	1	0.092	0.092	0.092	0.09	0.095	0.102	0.115	0.108	0.106
ELMIRA, NY												
O ₃	4th max 8-hour	NS	1	0.079	0.091	0.066	0.08	0.074	0.076	0.072	0.073	0.082
	2nd daily max 1-hour	NS	1	0.096	0.101	0.085	0.09	0.084	0.088	0.088	0.081	0.094
SO ₂	arithmetic mean	Down	1	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.003	0.003
	2nd max 24-hour	Down	1	0.021	0.022	0.021	0.019	0.023	0.014	0.016	0.015	0.011
ERIE, PA												
NO ₂	arithmetic mean	NS	1	0.015	0.013	0.014	0.014	0.015	0.015	0.015	0.015	0.015
O ₃	4th max 8-hour	NS	1	0.084	0.091	0.084	0.081	0.09	0.088	0.083	0.087	0.098
	2nd daily max 1-hour	NS	1	0.1	0.113	0.098	0.107	0.101	0.105	0.1	0.103	0.122
SO ₂	arithmetic mean	NS	1	0.014	0.01	0.011	0.011	0.01	0.009	0.011	0.009	0.01
	2nd max 24-hour	NS	1	0.057	0.044	0.056	0.072	0.076	0.05	0.066	0.035	0.068
EUGENE-SPRINGFIELD, OR												
CO	2nd max 8-hour	NS	2	4.9	5.2	6.2	5.3	5.85	5.2	5.15	4.95	4.25
O ₃	4th max 8-hour	NS	2	0.068	0.069	0.074	0.054	0.069	0.062	0.086	0.058	0.076
	2nd daily max 1-hour	NS	2	0.09	0.091	0.095	0.077	0.086	0.082	0.108	0.072	0.098
PM ₁₀	90th percentile	Down	5	55.6	65	55.8	62.6	45.6	43.6	37.4	36.8	33.8
	weighted annual mean	Down	5	28.4	31.86	28.48	28.68	24.58	22.86	19.94	20.98	18.14
EVANSVILLE-HENDERSON, IN-KY												
CO	2nd max 8-hour	NS	2	3.7	3.45	3.6	4.35	4.05	3.2	3.05	3.65	3.05
NO ₂	arithmetic mean	Down	1	0.018	0.021	0.018	0.017	0.018	0.017	0.017	0.016	0.018
O ₃	4th max 8-hour	NS	6	0.086	0.087	0.076	0.082	0.092	0.092	0.089	0.088	0.088
	2nd daily max 1-hour	NS	6	0.103	0.104	0.091	0.103	0.108	0.112	0.105	0.103	0.109
PM ₁₀	90th percentile	NS	4	49.75	47	48.5	49.25	50.75	52	40	43.5	43.5
	weighted annual mean	Down	4	30.85	32.25	29.175	29.1	31.425	30.775	25.225	26.15	27.425
SO ₂	arithmetic mean	Down	5	0.014	0.013	0.012	0.012	0.012	0.009	0.01	0.01	0.011
	2nd max 24-hour	Down	5	0.066	0.064	0.071	0.055	0.049	0.043	0.052	0.052	0.046
FAYETTEVILLE, NC												
O ₃	4th max 8-hour	NS	1	0.087	0.078	0.079	0.093	0.084	0.081	0.086	0.085	0.093
	2nd daily max 1-hour	NS	1	0.1	0.101	0.092	0.115	0.098	0.1	0.099	0.098	0.112
PM ₁₀	90th percentile	NS	1	50	45	39	41	40	35	39	41	39
	weighted annual mean	Down	1	31.4	26.9	26.2	27.3	25.1	23.3	25.3	24.8	26.5
FAYETTEVILLE-SPRINGDALE-ROGERS, AR												
PM ₁₀	90th percentile	NS	1	38	38	30	39	40	36	36	31	31
	weighted annual mean	NS	1	23.2	23.6	21.5	23.9	24.8	24.2	22.5	20.4	20.4
FLAGSTAFF, AZ-UT												
O ₃	4th max 8-hour	NS	1	0.072	0.073	0.074	0.066	0.073	0.069	0.073	0.072	0.076
	2nd daily max 1-hour	NS	1	0.082	0.079	0.079	0.07	0.081	0.075	0.082	0.076	0.086
FLINT, MI												
O ₃	4th max 8-hour	up	2	0.076	0.08	0.07	0.07	0.075	0.081	0.087	0.083	0.089
	2nd daily max 1-hour	NS	2	0.095	0.099	0.091	0.105	0.089	0.094	0.106	0.097	0.109
SO ₂	2nd max 24-hour	NS	1	0.014	0.014	0.014	0.017	0.017	0.016	0.012	0.012	0.011
FLORENCE, AL												
PM ₁₀	90th percentile	NS	1	39	41	34	37	34	37	29	32	35
	weighted annual mean	NS	1	23.5	23.7	21.3	22.6	20.1	22	17.8	18.7	22.2
SO ₂	arithmetic mean	Down	1	0.005	0.004	0.004	0.004	0.003	0.003	0.003	0.003	0.003
	2nd max 24-hour	Down	1	0.027	0.025	0.019	0.022	0.022	0.018	0.019	0.02	0.019
FORT COLLINS-LOVELAND, CO												
CO	2nd max 8-hour	Down	1	7	9.8	6.9	6.6	6	5.2	5.1	5.2	4.1
O ₃	4th max 8-hour	NS	2	0.066	0.074	0.069	0.068	0.072	0.072	0.069	0.07	0.076
	2nd daily max 1-hour	NS	2	0.083	0.09	0.091	0.091	0.095	0.089	0.092	0.088	0.092
PM ₁₀	90th percentile	Down	1	39	50	35	36	34	41	33	24	26
	weighted annual mean	Down	1	23.4	25.1	22.6	22.4	21.6	22.3	20.4	15.7	16.2

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
FORT LAUDERDALE, FL													
CO	2nd max 8-hour	Down	6	4.333	4.467	4.567	3.95	4.05	4.333	3.417	3.483	2.7	3.417
Pb	max quarterly mean	up	1	0.013	0.021	0.037	0.027	0.029	0.019	0.047	0.037	0.037	0.037
NO ₂	arithmetic mean	NS	1	0.009	0.009	0.009	0.01	0.009	0.011	0.01	0.01	0.01	0.011
O ₃	4th max 8-hour	NS	3	0.07	0.063	0.077	0.078	0.07	0.065	0.065	0.07	0.074	0.071
	2nd daily max 1-hour	NS	3	0.092	0.093	0.098	0.098	0.092	0.093	0.094	0.089	0.095	0.097
PM ₁₀	90th percentile	NS	5	26	26	26	28.2	22	22.2	24	23	29	21.4
	weighted annual mean	NS	5	17.78	17.78	17.78	18.34	16.22	15.34	16.26	16.28	18.68	15.84
SO ₂	arithmetic mean	up	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.003
	2nd max 24-hour	up	1	0.006	0.006	0.006	0.011	0.013	0.008	0.008	0.011	0.017	0.015
FORT MYERS-CAPE CORAL, FL													
O ₃	4th max 8-hour	NS	1	0.069	0.064	0.073	0.069	0.076	0.066	0.062	0.067	0.092	0.077
	2nd daily max 1-hour	NS	1	0.08	0.082	0.082	0.078	0.09	0.086	0.072	0.076	0.109	0.096
FORT SMITH, AR-OK													
PM ₁₀	90th percentile	NS	1	38	37	36	39	38	44	36	39	39	39
	weighted annual mean	NS	1	25.7	24.7	23.5	24.9	23.8	25.7	25.3	22.3	22.3	22.3
FORT WAYNE, IN													
O ₃	4th max 8-hour	NS	2	0.086	0.088	0.088	0.081	0.094	0.094	0.091	0.087	0.089	0.089
	2nd daily max 1-hour	NS	2	0.094	0.1	0.095	0.093	0.113	0.109	0.1	0.095	0.103	0.1
PM ₁₀	90th percentile	Down	1	53	44	38	36	43	44	28	28	39	31
	weighted annual mean	NS	1	27.2	27.2	22.7	22.9	23.5	23.9	17.2	19.6	23.7	17
FORT WORTH-ARLINGTON, TX													
CO	2nd max 8-hour	Down	1	3.6	3.4	3.8	3.5	2.7	3.3	2.8	2.8	2.5	2.6
NO ₂	arithmetic mean	NS	1	0.012	0.014	0.015	0.013	0.017	0.017	0.015	0.016	0.013	0.017
O ₃	4th max 8-hour	NS	2	0.099	0.108	0.084	0.093	0.101	0.104	0.094	0.092	0.099	0.102
	2nd daily max 1-hour	NS	2	0.135	0.145	0.122	0.113	0.133	0.141	0.129	0.123	0.126	0.145
PM ₁₀	90th percentile	NS	2	40	32	29	32	32.5	36	39	30	30	30
	weighted annual mean	NS	2	23.65	21.55	19.85	19.7	19.55	22.45	22.95	19.75	19.75	19.75
FRESNO, CA													
CO	2nd max 8-hour	Down	4	5.725	6.125	4.575	4.175	4.925	4.225	4.15	3.5	3.5	3.4
Pb	max quarterly mean	Down	1	0.065	0.037	0.035	0.025	0.02	0.015	0.008	0.011	0.013	0.013
NO ₂	arithmetic mean	Down	4	0.021	0.021	0.02	0.021	0.02	0.02	0.019	0.018	0.021	
O ₃	4th max 8-hour	NS	5	0.1	0.105	0.105	0.106	0.096	0.103	0.108	0.102	0.116	0.103
	2nd daily max 1-hour	NS	5	0.138	0.146	0.142	0.14	0.128	0.134	0.142	0.128	0.154	0.132
PM ₁₀	90th percentile	NS	5	106.6	100.4	72.6	85.6	63	80	59.2	76.8	61.8	81.2
	weighted annual mean	Down	5	54.96	53.76	45.22	43.18	40.24	41.04	35.14	40.38	34.42	42.38
GADSDEN, AL													
PM ₁₀	90th percentile	NS	2	54.5	56	52	57.5	46	42.5	35.5	47	50	46.5
	weighted annual mean	Down	2	32.8	32.2	31.35	33.2	30.3	29.6	23.4	26.25	30.95	28.25
GALVESTON-TEXAS CITY, TX													
O ₃	4th max 8-hour	NS	1	0.09	0.091	0.067	0.114	0.088	0.14	0.08	0.097	0.095	0.108
	2nd daily max 1-hour	NS	1	0.15	0.15	0.097	0.176	0.125	0.198	0.107	0.175	0.146	0.172
PM ₁₀	90th percentile	NS	2	43.5	37.5	36.5	42	39	45.5	31	38	38	38
	weighted annual mean	NS	2	25.7	22.3	23.2	23.15	24.15	27.8	21.1	23.25	23.25	23.25
SO ₂	arithmetic mean	NS	1	0.007	0.007	0.005	0.005	0.006	0.006	0.014	0.006	0.004	0.007
	2nd max 24-hour	NS	1	0.063	0.05	0.039	0.056	0.052	0.089	0.067	0.053	0.039	0.04
GARY, IN													
CO	2nd max 8-hour	NS	2	4.15	4.05	4.35	4.7	5.55	3.85	3.25	3.65	3.85	3.8
Pb	max quarterly mean	NS	3	0.21	0.098	0.1	0.074	0.181	0.093	0.127	0.088	0.085	0.103
O ₃	4th max 8-hour	NS	2	0.08	0.086	0.084	0.072	0.084	0.101	0.095	0.093	0.086	0.098
	2nd daily max 1-hour	NS	2	0.097	0.11	0.118	0.087	0.111	0.122	0.121	0.116	0.117	0.115
PM ₁₀	90th percentile	Down	7	50.571	43.429	42.286	38.571	41.571	40.857	32.286	31.429	35.429	29.857
	weighted annual mean	Down	7	32.443	28.329	25.4	22.886	25.414	24.129	20.4	20.993	22.571	20.486
SO ₂	arithmetic mean	Down	4	0.01	0.008	0.008	0.008	0.007	0.005	0.005	0.006	0.006	0.005
	2nd max 24-hour	Down	4	0.052	0.029	0.031	0.034	0.034	0.024	0.025	0.026	0.03	0.021
GOLDSBORO, NC													
PM ₁₀	90th percentile	NS	1	46	46	36	36	33	30	33	36	34	34
	weighted annual mean	Down	1	26.8	26.8	24.3	23.8	21	20.2	22.6	23.1	21.9	21.9
GRAND JUNCTION, CO													
CO	2nd max 8-hour	Down	1	6.7	6.7	6.7	6.1	6	5.4	5.8	5.4	5.3	4.7
PM ₁₀	90th percentile	Down	4	39.5	49.25	41.5	32.5	36	30.75	30.25	29.5	30.5	33
	weighted annual mean	Down	4	18.925	20.95	18.45	17.35	17.15	15.2	14.875	14.5	15.3	15.325
GRAND RAPIDS-MUSKEGON-HOLLAND, MI													
CO	2nd max 8-hour	NS	1	3.5	4	3.2	3.2	4	4.6	3.3	2.4	2.9	3.5
Pb	max quarterly mean	Down	3	0.023	0.016	0.019	0.014	0.013	0.01	0.012	0.012	0.012	0.012
O ₃	4th max 8-hour	NS	4	0.101	0.099	0.082	0.082	0.086	0.098	0.089	0.083	0.086	0.092
	2nd daily max 1-hour	NS	4	0.129	0.13	0.108	0.099	0.11	0.122	0.122	0.103	0.105	0.108
PM ₁₀	90th percentile	Down	2	55	40.5	54	39	46	40	34.5	32	37.5	36
	weighted annual mean	Down	2	30	25.65	34.8	21.7	26.85	20.95	20.25	18.65	21.25	18.9
SO ₂	arithmetic mean	Down	1	0.004	0.004	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.001
	2nd max 24-hour	Down	1	0.012	0.014	0.015	0.012	0.013	0.011	0.011	0.008	0.008	0.006

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
GREAT FALLS, MT												
CO	2nd max 8-hour	NS	1	5.6	6.6	5.8	6.9	4.8	6.2	5.4	6.4	4.5
PM ₁₀	90th percentile	Down	1	39	44	40	40	34	30	35	32	32
	weighted annual mean	Down	1	23.7	21.1	21.4	21.4	20.8	17.9	19.1	20.3	20.3
GREELEY, CO												
CO	2nd max 8-hour	Down	1	7.1	7.8	7.5	5.8	5.2	5.3	7	4.8	4.4
O ₃	4th max 8-hour	NS	1	0.076	0.077	0.064	0.063	0.071	0.072	0.07	0.069	0.075
	2nd daily max 1-hour	NS	1	0.109	0.096	0.084	0.087	0.087	0.093	0.097	0.095	0.102
PM ₁₀	90th percentile	Down	1	43	51	43	39	37	34	30	30	29
	weighted annual mean	Down	1	24.7	25.9	25.4	22.6	23.1	19.9	17.7	17.8	16.5
GREEN BAY, WI												
SO ₂	arithmetic mean	Down	1	0.005	0.005	0.004	0.003	0.003	0.004	0.003	0.003	0.003
	2nd max 24-hour	Down	1	0.02	0.042	0.021	0.018	0.015	0.017	0.011	0.017	0.011
GREENSBORO—WINSTON-SALEM—HIGH POINT, NC												
CO	2nd max 8-hour	Down	1	6.8	6.6	5.7	5.5	6	6.2	4.3	4.7	5.4
NO ₂	arithmetic mean	NS	1	0.017	0.016	0.015	0.017	0.017	0.016	0.016	0.017	0.016
O ₃	4th max 8-hour	up	2	0.091	0.084	0.08	0.091	0.087	0.088	0.088	0.088	0.096
	2nd daily max 1-hour	NS	2	0.112	0.102	0.1	0.118	0.108	0.11	0.114	0.11	0.119
PM ₁₀	90th percentile	Down	3	49.333	47.667	41	44.667	35.333	39	35.333	36.667	38.667
	weighted annual mean	Down	3	30.967	30.9	26.9	27.4	24.8	25.9	24.033	23.933	24.4
SO ₂	arithmetic mean	NS	1	0.008	0.007	0.006	0.006	0.007	0.007	0.007	0.007	0.006
	2nd max 24-hour	NS	1	0.023	0.027	0.019	0.022	0.021	0.025	0.026	0.023	0.023
GREENVILLE, NC												
O ₃	4th max 8-hour	NS	1	0.082	0.082	0.078	0.091	0.077	0.082	0.086	0.097	0.089
	2nd daily max 1-hour	up	1	0.091	0.091	0.095	0.108	0.086	0.098	0.097	0.122	0.109
GREENVILLE-SPARTANBURG-ANDERSON, SC												
Pb	max quarterly mean	Down	3	0.04	0.035	0.018	0.022	0.019	0.016	0.009	0.01	0.015
NO ₂	arithmetic mean	Down	1	0.019	0.019	0.019	0.018	0.018	0.017	0.016	0.017	0.017
O ₃	4th max 8-hour	up	4	0.075	0.079	0.079	0.087	0.082	0.087	0.085	0.087	0.098
	2nd daily max 1-hour	up	4	0.094	0.098	0.094	0.113	0.099	0.112	0.105	0.102	0.116
SO ₂	arithmetic mean	NS	1	0.002	0.003	0.003	0.003	0.003	0.001	0.002	0.003	0.003
	2nd max 24-hour	NS	1	0.011	0.017	0.013	0.012	0.016	0.007	0.012	0.014	0.015
HAMILTON-MIDDLETON, OH												
O ₃	4th max 8-hour	NS	2	0.099	0.094	0.071	0.091	0.091	0.092	0.093	0.09	0.091
	2nd daily max 1-hour	NS	2	0.122	0.111	0.097	0.121	0.113	0.127	0.111	0.111	0.114
PM ₁₀	90th percentile	NS	4	59.5	61.25	50.75	62.75	53.25	57.75	44.5	53.75	53.25
	weighted annual mean	NS	4	34.275	35.55	30.075	31.125	30.375	33.8	29.325	30.425	30.45
SO ₂	arithmetic mean	Down	2	0.01	0.009	0.007	0.008	0.008	0.005	0.007	0.007	0.006
	2nd max 24-hour	Down	2	0.037	0.04	0.033	0.035	0.038	0.019	0.025	0.034	0.021
HARRISBURG-LEBANON-CARLISLE, PA												
Pb	max quarterly mean	NS	1	0.039	0.039	0.039	0.041	0.041	0.041	0.04	0.039	0.036
NO ₂	arithmetic mean	NS	2	0.013	0.014	0.013	0.011	0.015	0.014	0.015	0.013	0.012
O ₃	4th max 8-hour	NS	3	0.091	0.096	0.077	0.094	0.089	0.086	0.08	0.089	0.092
	2nd daily max 1-hour	NS	3	0.11	0.109	0.093	0.113	0.115	0.105	0.097	0.11	0.112
PM ₁₀	90th percentile	NS	1	35	39	27	30	44	32	31	33	33
	weighted annual mean	NS	1	18.5	22	17.8	20.7	22.3	20.7	18.8	21.9	21.9
SO ₂	arithmetic mean	Down	2	0.005	0.006	0.005	0.006	0.007	0.005	0.005	0.005	0.004
	2nd max 24-hour	NS	2	0.021	0.021	0.022	0.021	0.035	0.017	0.021	0.022	0.017
HARTFORD, CT												
CO	2nd max 8-hour	Down	2	6.45	6.1	6.05	5.55	6.35	5.75	4.975	4.8	5.4
NO ₂	arithmetic mean	NS	1	0.019	0.02	0.017	0.018	0.02	0.017	0.016	0.018	0.02
O ₃	4th max 8-hour	Down	3	0.103	0.108	0.093	0.1	0.099	0.097	0.082	0.099	0.09
	2nd daily max 1-hour	NS	3	0.149	0.157	0.123	0.146	0.133	0.134	0.098	0.143	0.12
PM ₁₀	90th percentile	Down	6	34.667	38.167	33.667	30.833	34.667	28.5	30	33.167	31
	weighted annual mean	NS	6	19.9	23	19.917	17.783	20.017	16.417	17.383	18.45	17.983
SO ₂	arithmetic mean	Down	4	0.007	0.007	0.006	0.005	0.006	0.004	0.004	0.004	0.004
	2nd max 24-hour	Down	4	0.03	0.03	0.027	0.019	0.027	0.019	0.018	0.021	0.019
HONOLULU, HI												
CO	2nd max 8-hour	Down	4	1.95	1.775	1.875	2	1.85	1.7	1.575	1.525	1.45
O ₃	4th max 8-hour	NS	1	0.034	0.041	0.047	0.049	0.052	0.051	0.041	0.047	0.049
	2nd daily max 1-hour	NS	1	0.053	0.05	0.059	0.055	0.055	0.056	0.047	0.053	0.056
PM ₁₀	90th percentile	NS	3	21.667	22.333	21.333	21	23	21	22.667	19	21.667
	weighted annual mean	NS	3	10.167	10.533	10.567	11.167	12.167	10.5	11.467	11.633	12.2
SO ₂	arithmetic mean	NS	3	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.002	0.001
	2nd max 24-hour	NS	3	0.006	0.006	0.006	0.009	0.006	0.005	0.007	0.005	0.007
HOUMA, LA												
O ₃	4th max 8-hour	NS	1	0.083	0.076	0.07	0.075	0.086	0.101	0.075	0.079	0.089
	2nd daily max 1-hour	NS	1	0.115	0.097	0.091	0.096	0.103	0.141	0.094	0.103	0.115

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
HOUSTON, TX													
CO	2nd max 8-hour	Down	4	6.775	6.025	6.775	5.6	4.9	4.025	5.25	4.275	3.8	3.35
NO ₂	arithmetic mean	Down	4	0.023	0.022	0.022	0.019	0.021	0.021	0.02	0.021	0.019	0.02
O ₃	4th max 8-hour	NS	9	0.116	0.098	0.102	0.095	0.097	0.114	0.097	0.107	0.109	0.102
	2nd daily max 1-hour	NS	9	0.192	0.167	0.162	0.161	0.147	0.168	0.154	0.171	0.174	0.159
PM ₁₀	90th percentile	Down	5	50.2	48.2	48	50.4	50.2	48	39	47.8	47.8	47.8
	weighted annual mean	Down	5	31.4	31.4	30.22	30.36	30.96	29.54	26	29.42	29.42	29.42
SO ₂	arithmetic mean	Down	5	0.005	0.006	0.005	0.005	0.004	0.004	0.004	0.003	0.003	0.003
	2nd max 24-hour	Down	5	0.025	0.027	0.024	0.022	0.02	0.025	0.023	0.017	0.018	0.015
HUNTINGTON-ASHLAND, WV-KY-OH													
Pb	max quarterly mean	NS	1	0.048	0.028	0.033	0.022	0.03	0.036	0.049	0.023	0.023	0.023
O ₃	4th max 8-hour	NS	3	0.093	0.096	0.078	0.09	0.092	0.089	0.077	0.081	0.097	0.094
	2nd daily max 1-hour	NS	3	0.114	0.131	0.097	0.11	0.126	0.117	0.097	0.112	0.127	0.116
PM ₁₀	90th percentile	Down	5	53.8	50.4	46	52.2	51.6	48.2	39	45.2	44	47
	weighted annual mean	Down	5	33.82	32.44	29.18	28.46	30.68	29.86	26.46	28.4	26.48	27.9
SO ₂	arithmetic mean	Down	8	0.012	0.012	0.01	0.011	0.01	0.009	0.008	0.008	0.008	0.008
	2nd max 24-hour	Down	8	0.07	0.05	0.043	0.052	0.049	0.034	0.028	0.031	0.033	0.03
HUNTSVILLE, AL													
CO	2nd max 8-hour	NS	1	4.2	4.1	4.2	4	3.5	3.6	3	3.1	3.3	4.3
O ₃	4th max 8-hour	NS	1	0.079	0.082	0.087	0.087	0.075	0.08	0.081	0.086	0.092	0.093
	2nd daily max 1-hour	NS	1	0.087	0.106	0.114	0.112	0.107	0.102	0.096	0.096	0.118	0.106
PM ₁₀	90th percentile	Down	3	47.333	49.333	43	40	35.5	34.333	31.333	37.333	34.667	35.667
	weighted annual mean	Down	3	29.5	27.3	25.967	23.6	22.667	22.567	20.767	20.8	22.033	22.867
INDIANAPOLIS, IN													
CO	2nd max 8-hour	Down	2	3.95	5.15	3.5	4	3.45	3.85	2.75	3.15	2.65	2.4
Pb	max quarterly mean	Down	4	1.11	0.738	0.596	0.654	1.003	0.299	0.073	0.054	0.059	0.095
NO ₂	arithmetic mean	NS	1	0.018	0.018	0.018	0.018	0.019	0.02	0.018	0.015	0.019	0.018
O ₃	4th max 8-hour	up	6	0.085	0.086	0.082	0.083	0.093	0.094	0.096	0.088	0.094	0.094
	2nd daily max 1-hour	NS	6	0.102	0.1	0.094	0.098	0.11	0.111	0.116	0.104	0.113	0.107
PM ₁₀	90th percentile	Down	13	54.308	49.077	43	51.231	46.462	46.077	34.308	36.308	38.923	37
	weighted annual mean	Down	13	32.8	30.562	27.608	27.677	28.254	28.115	22.508	22.523	23.9	21.838
SO ₂	arithmetic mean	Down	6	0.009	0.008	0.007	0.008	0.007	0.005	0.005	0.005	0.005	0.005
	2nd max 24-hour	Down	6	0.033	0.03	0.028	0.037	0.038	0.021	0.024	0.023	0.021	0.02
JACKSON, MS													
CO	2nd max 8-hour	NS	1	4.3	4.3	4.3	6.2	5.1	4.4	4.8	3.8	3.7	5
O ₃	4th max 8-hour	up	2	0.08	0.072	0.071	0.073	0.073	0.076	0.077	0.077	0.084	0.083
	2nd daily max 1-hour	up	2	0.1	0.085	0.083	0.089	0.086	0.09	0.093	0.095	0.105	0.103
PM ₁₀	90th percentile	Down	1	44	44	43	38	32	34	34	36	32	32
	weighted annual mean	Down	1	25.7	25.7	27	23.3	20.9	22.8	21.5	24	19.9	19.9
SO ₂	arithmetic mean	NS	1	0.005	0.005	0.005	0.003	0.002	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	Down	1	0.013	0.013	0.013	0.01	0.008	0.007	0.008	0.007	0.008	0.007
JACKSON, TN													
PM ₁₀	90th percentile	NS	2	44	39	41	37	31.5	42.5	33.5	34	34	34
	weighted annual mean	Down	2	27.7	26.9	27.4	23.35	22.6	25.1	22.1	22.55	23.3	23.3
JACKSONVILLE, FL													
CO	2nd max 8-hour	Down	4	4.05	3.6	4.15	4.075	3.85	3.6	3.075	2.5	2.675	3.375
Pb	max quarterly mean	Down	2	0.038	0.025	0.024	0.048	0.02	0.028	0.022	0.017	0.018	0.018
NO ₂	arithmetic mean	NS	1	0.015	0.014	0.014	0.015	0.014	0.016	0.015	0.014	0.015	0.016
O ₃	4th max 8-hour	NS	2	0.081	0.072	0.079	0.081	0.074	0.074	0.075	0.08	0.082	0.079
	2nd daily max 1-hour	NS	2	0.11	0.089	0.102	0.11	0.099	0.112	0.091	0.101	0.101	0.099
PM ₁₀	90th percentile	NS	2	45	46.5	41.5	38.5	39.5	39	34.5	38.5	43	41.5
	weighted annual mean	NS	2	33.75	33.15	27	27.6	26.55	25.9	25.25	25.5	29	28.2
SO ₂	arithmetic mean	NS	6	0.004	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
	2nd max 24-hour	Down	6	0.034	0.022	0.022	0.026	0.031	0.018	0.019	0.016	0.021	0.019
JACKSONVILLE, NC													
PM ₁₀	90th percentile	NS	1	39	39	35	35	28	29	32	32	37	37
	weighted annual mean	NS	1	23.9	23.9	22.9	22.9	20.4	19.8	21.9	20.2	22.1	22.1
JAMESTOWN, NY													
O ₃	4th max 8-hour	up	1	0.076	0.076	0.083	0.081	0.08	0.089	0.081	0.087	0.095	0.087
	2nd daily max 1-hour	NS	1	0.098	0.098	0.098	0.104	0.094	0.104	0.097	0.105	0.111	0.101
PM ₁₀	90th percentile	NS	2	38.5	38.5	29	31.5	32.5	30	27.5	33.5	37	35.5
	weighted annual mean	NS	2	20.5	20.5	17.75	16.15	15.8	16.4	16.6	16.85	18.7	17.3
SO ₂	arithmetic mean	Down	2	0.01	0.01	0.009	0.009	0.008	0.007	0.007	0.006	0.006	0.006
	2nd max 24-hour	Down	2	0.047	0.039	0.039	0.041	0.053	0.039	0.033	0.029	0.026	0.03
JANESVILLE-BELOIT, WI													
O ₃	4th max 8-hour	NS	1	0.076	0.076	0.076	0.063	0.076	0.083	0.082	0.075	0.077	0.08
	2nd daily max 1-hour	NS	1	0.091	0.091	0.091	0.083	0.092	0.095	0.101	0.088	0.087	0.095

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
JERSEY CITY, NJ												
CO	2nd max 8-hour	Down	2	8.45	8.6	7.85	6.6	8.3	7.15	5.8	5.5	4.85
NO ₂	arithmetic mean	Down	1	0.03	0.028	0.028	0.027	0.026	0.026	0.027	0.026	0.027
O ₃	4th max 8-hour	NS	1	0.106	0.115	0.092	0.103	0.095	0.104	0.087	0.105	0.089
	2nd daily max 1-hour	NS	1	0.175	0.136	0.112	0.131	0.118	0.125	0.12	0.119	0.118
PM ₁₀	90th percentile	Down	2	51.5	55	44.5	46.5	56.5	42	43	42.5	36
	weighted annual mean	Down	2	31.2	32.35	26.8	29.05	34	26.5	28.35	26.75	22.85
SO ₂	arithmetic mean	Down	2	0.013	0.012	0.01	0.009	0.009	0.007	0.008	0.008	0.007
	2nd max 24-hour	Down	2	0.043	0.035	0.041	0.03	0.036	0.026	0.027	0.025	0.022
JOHNSON CITY-KINGSPORT-BRISTOL, TN-VA												
CO	2nd max 8-hour	NS	1	3.4	3.3	3	6.5	3.4	3	3	3.5	3.4
NO ₂	arithmetic mean	Down	1	0.019	0.019	0.018	0.017	0.017	0.018	0.018	0.018	0.017
O ₃	4th max 8-hour	NS	1	0.1	0.078	0.082	0.088	0.083	0.091	0.083	0.082	0.096
	2nd daily max 1-hour	NS	1	0.117	0.115	0.103	0.125	0.103	0.114	0.099	0.111	0.115
PM ₁₀	90th percentile	Down	1	44	48	38	46	38	40	37	37	30
	weighted annual mean	Down	1	29.3	30.5	24.9	25.2	25	24.7	22.7	20.8	20.7
SO ₂	arithmetic mean	NS	3	0.009	0.009	0.009	0.008	0.009	0.008	0.009	0.009	0.009
	2nd max 24-hour	NS	3	0.044	0.044	0.039	0.042	0.045	0.039	0.044	0.05	0.043
JOHNSTOWN, PA												
CO	2nd max 8-hour	Down	1	3.7	4.8	4.4	4.2	4.1	3.5	4.8	2.7	3.1
NO ₂	arithmetic mean	Down	1	0.018	0.019	0.018	0.017	0.018	0.015	0.018	0.016	0.015
O ₃	4th max 8-hour	NS	1	0.08	0.096	0.074	0.083	0.083	0.09	0.083	0.092	0.098
	2nd daily max 1-hour	NS	1	0.103	0.113	0.089	0.099	0.094	0.101	0.098	0.104	0.124
SO ₂	arithmetic mean	Down	1	0.014	0.015	0.013	0.015	0.014	0.012	0.011	0.009	0.008
	2nd max 24-hour	Down	1	0.046	0.043	0.052	0.049	0.08	0.042	0.034	0.03	0.027
JONESBORO, AR												
PM ₁₀	90th percentile	NS	1	47	47	41	46	50	50	42	40	40
	weighted annual mean	Down	1	26.8	26.7	25.3	25.2	28	27.6	25.6	23.7	23.7
KALAMAZOO-BATTLE CREEK, MI												
PM ₁₀	90th percentile	NS	1	58	56	42	39	44	50	33	38	47
	weighted annual mean	Down	1	28.1	29.3	27.1	24	25.9	26	22	22.6	26.7
KANSAS CITY, MO-KS												
CO	2nd max 8-hour	NS	3	4.433	4	3.9	4.167	4.333	3.333	3.2	3.233	3.7
Pb	max quarterly mean	NS	5	0.03	0.027	0.023	0.02	0.017	0.018	0.028	0.1	0.1
NO ₂	arithmetic mean	NS	3	0.011	0.01	0.01	0.009	0.01	0.01	0.012	0.01	0.012
O ₃	4th max 8-hour	up	6	0.073	0.079	0.075	0.074	0.079	0.09	0.08	0.086	0.087
	2nd daily max 1-hour	up	6	0.097	0.1	0.094	0.097	0.097	0.119	0.101	0.107	0.117
PM ₁₀	90th percentile	NS	7	51	51.286	47.143	48.143	46.714	43.714	56.429	39.714	44.143
	weighted annual mean	NS	7	31.343	31.614	30.186	30.186	29.886	24.429	33	26.143	27.114
SO ₂	arithmetic mean	NS	5	0.003	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.003
	2nd max 24-hour	NS	5	0.022	0.017	0.016	0.02	0.025	0.018	0.024	0.013	0.01
KENOSHA, WI												
O ₃	4th max 8-hour	NS	2	0.084	0.108	0.085	0.085	0.088	0.103	0.084	0.087	0.09
	2nd daily max 1-hour	NS	2	0.106	0.135	0.112	0.114	0.119	0.119	0.13	0.111	0.121
KNOXVILLE, TN												
CO	2nd max 8-hour	Down	1	5.1	4.5	4.5	4.6	4.3	4.1	3.3	4.8	3.9
O ₃	4th max 8-hour	up	5	0.092	0.083	0.081	0.09	0.088	0.094	0.091	0.093	0.104
	2nd daily max 1-hour	up	5	0.11	0.101	0.096	0.11	0.109	0.116	0.108	0.113	0.124
PM ₁₀	90th percentile	Down	8	52.5	52.25	46.75	48.375	48.75	48.75	48.75	44	41.25
	weighted annual mean	Down	8	31.963	34.225	30.45	30.15	31.725	31.188	30.513	26.438	26.075
SO ₂	arithmetic mean	NS	3	0.006	0.006	0.006	0.006	0.006	0.007	0.006	0.006	0.005
	2nd max 24-hour	NS	3	0.03	0.034	0.034	0.037	0.034	0.034	0.037	0.033	0.028
LAKE CHARLES, LA												
O ₃	4th max 8-hour	NS	1	0.085	0.087	0.073	0.077	0.075	0.084	0.077	0.085	0.09
	2nd daily max 1-hour	NS	1	0.11	0.121	0.105	0.103	0.095	0.113	0.092	0.114	0.123
LAKELAND-WINTER HAVEN, FL												
O ₃	4th max 8-hour	NS	2	0.072	0.072	0.072	0.082	0.072	0.073	0.07	0.078	0.087
	2nd daily max 1-hour	NS	2	0.095	0.095	0.095	0.103	0.088	0.089	0.089	0.101	0.104
SO ₂	arithmetic mean	NS	2	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.005	0.006
	2nd max 24-hour	NS	2	0.018	0.015	0.015	0.019	0.016	0.013	0.019	0.016	0.022
LANCASTER, PA												
CO	2nd max 8-hour	NS	1	3.4	2.6	2.6	3	3.8	2.4	2.6	3.3	1.9
Pb	max quarterly mean	NS	1	0.058	0.043	0.038	0.038	0.042	0.04	0.041	0.041	0.04
NO ₂	arithmetic mean	NS	1	0.017	0.018	0.015	0.015	0.019	0.016	0.017	0.016	0.015
O ₃	4th max 8-hour	NS	1	0.087	0.099	0.086	0.095	0.093	0.102	0.085	0.102	0.101
	2nd daily max 1-hour	NS	1	0.101	0.119	0.106	0.118	0.111	0.124	0.101	0.133	0.119
PM ₁₀	90th percentile	NS	1	52	45	41	54	61	55	46	50	50
	weighted annual mean	up	1	30.6	29.6	27	30.6	37.5	33.1	30.9	33.6	33.6
SO ₂	arithmetic mean	NS	1	0.006	0.006	0.006	0.007	0.006	0.006	0.005	0.007	0.006
	2nd max 24-hour	NS	1	0.028	0.023	0.023	0.026	0.03	0.018	0.021	0.023	0.02

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
LANSING-EAST LANSING, MI												
O ₃	4th max 8-hour	NS	2	0.08	0.083	0.08	0.079	0.079	0.082	0.076	0.078	0.08
	2nd daily max 1-hour	NS	2	0.095	0.11	0.091	0.096	0.093	0.096	0.087	0.088	0.1
LAS CRUCES, NM												
CO	2nd max 8-hour	Down	1	6.3	6.5	4.9	8.7	5	4.4	4.3	4.8	4.2
Pb	max quarterly mean	Down	2	0.167	0.147	0.126	0.117	0.054	0.086	0.071	0.075	0.075
O ₃	4th max 8-hour	NS	3	0.07	0.071	0.07	0.073	0.074	0.074	0.075	0.067	0.072
	2nd daily max 1-hour	NS	3	0.098	0.096	0.099	0.107	0.104	0.105	0.104	0.09	0.1
PM ₁₀	90th percentile	NS	3	60	52	56.667	47	55	55.333	50.333	43.333	42
	weighted annual mean	NS	3	35.233	31.167	31.467	29.767	32.6	34.267	33.3	26.8	26.767
SO ₂	arithmetic mean	Down	2	0.011	0.01	0.009	0.006	0.004	0.004	0.004	0.003	0.003
	2nd max 24-hour	Down	2	0.056	0.055	0.052	0.055	0.023	0.021	0.03	0.014	0.012
LAS VEGAS, NV-AZ												
CO	2nd max 8-hour	Down	1	7.7	6.9	6.1	7.2	6.9	6.4	6.6	5.5	6.2
O ₃	4th max 8-hour	NS	3	0.073	0.065	0.076	0.075	0.077	0.073	0.08	0.074	0.077
	2nd daily max 1-hour	Down	3	0.101	0.09	0.093	0.096	0.091	0.088	0.094	0.088	0.087
PM ₁₀	90th percentile	NS	1	127	88	76	75	67	77	82	90	84
	weighted annual mean	NS	1	69	58.8	48.3	43.1	47.4	46.7	52.5	59.7	52.4
LAWRENCE, MA-NH												
O ₃	4th max 8-hour	NS	1	0.073	0.086	0.074	0.076	0.082	0.069	0.079	0.078	0.076
	2nd daily max 1-hour	NS	1	0.091	0.119	0.086	0.1	0.101	0.081	0.092	0.097	0.096
PM ₁₀	90th percentile	NS	1	32	30	32	36	32	24	22	25	28
	weighted annual mean	Down	1	20.6	18.3	19.1	18.3	15.9	13.4	14.3	14.8	15.2
SO ₂	arithmetic mean	Down	2	0.008	0.007	0.008	0.008	0.006	0.006	0.005	0.005	0.006
	2nd max 24-hour	Down	2	0.029	0.026	0.027	0.026	0.027	0.025	0.019	0.02	0.021
LAWTON, OK												
PM ₁₀	90th percentile	NS	1	51	43	41	35	43	44	44	48	48
	weighted annual mean	NS	1	29.9	27.1	25.5	27	27.7	25.3	27.8	26.2	26.2
LEWISTON-AUBURN, ME												
PM ₁₀	90th percentile	Down	1	41	50	43	49	35	37	31	35	31
	weighted annual mean	Down	1	24.7	28.5	24	24.3	20.2	19.8	20	20.6	18.2
SO ₂	arithmetic mean	Down	1	0.007	0.006	0.005	0.007	0.006	0.004	0.004	0.004	0.004
	2nd max 24-hour	Down	1	0.027	0.023	0.02	0.025	0.025	0.02	0.018	0.017	0.019
LEXINGTON, KY												
CO	2nd max 8-hour	NS	1	3.7	4.9	3.8	6.5	4.2	3	3.1	5.2	5.2
NO ₂	arithmetic mean	Down	1	0.017	0.016	0.016	0.017	0.016	0.017	0.014	0.014	0.011
O ₃	4th max 8-hour	NS	3	0.078	0.074	0.065	0.079	0.088	0.085	0.079	0.079	0.087
	2nd daily max 1-hour	up	3	0.097	0.088	0.08	0.099	0.104	0.103	0.088	0.096	0.105
PM ₁₀	90th percentile	Down	3	48.333	46.333	40	42	45.667	40.333	39	37.333	39.333
	weighted annual mean	Down	3	29.4	29.133	24.9	24.033	27.933	24.7	24.033	22.433	23.333
SO ₂	arithmetic mean	NS	1	0.006	0.008	0.007	0.007	0.008	0.006	0.006	0.006	0.008
	2nd max 24-hour	NS	1	0.02	0.025	0.03	0.026	0.037	0.016	0.02	0.016	0.023
LIMA, OH												
O ₃	4th max 8-hour	NS	1	0.084	0.09	0.082	0.09	0.089	0.092	0.092	0.083	0.089
	2nd daily max 1-hour	NS	1	0.096	0.102	0.1	0.099	0.102	0.106	0.11	0.091	0.102
SO ₂	arithmetic mean	Down	1	0.005	0.006	0.004	0.005	0.004	0.003	0.003	0.003	0.003
	2nd max 24-hour	Down	1	0.026	0.021	0.02	0.023	0.036	0.015	0.015	0.016	0.017
LINCOLN, NE												
CO	2nd max 8-hour	NS	2	6.15	7.4	4.45	4.25	3.95	4.85	3.35	5	4.25
O ₃	4th max 8-hour	NS	1	0.057	0.06	0.067	0.049	0.062	0.06	0.054	0.054	0.058
	2nd daily max 1-hour	NS	1	0.067	0.067	0.074	0.057	0.075	0.07	0.06	0.061	0.068
PM ₁₀	90th percentile	NS	2	49	52.5	42	38	45.5	44.5	44	38.5	40
	weighted annual mean	NS	2	28.65	29.85	25.2	26.05	27.8	24.75	28.15	24.25	26.1
LITTLE ROCK-NORTH LITTLE ROCK, AR												
NO ₂	arithmetic mean	NS	1	0.009	0.009	0.012	0.009	0.011	0.011	0.011	0.01	0.011
O ₃	4th max 8-hour	NS	2	0.08	0.078	0.076	0.076	0.076	0.086	0.077	0.077	0.078
	2nd daily max 1-hour	NS	2	0.099	0.098	0.089	0.096	0.09	0.106	0.096	0.099	0.097
PM ₁₀	90th percentile	NS	4	48.75	42.5	47.25	44.25	46.5	50	40.5	42.25	42.25
	weighted annual mean	Down	4	28.5	25.1	27.9	26.925	27.225	29.225	26.2	24.525	24.525
SO ₂	arithmetic mean	Down	1	0.003	0.003	0.005	0.006	0.003	0.002	0.002	0.002	0.002
	2nd max 24-hour	Down	1	0.014	0.012	0.012	0.017	0.009	0.008	0.009	0.006	0.005
LONGVIEW-MARSHALL, TX												
O ₃	4th max 8-hour	up	1	0.088	0.081	0.079	0.093	0.081	0.102	0.082	0.091	0.104
	2nd daily max 1-hour	NS	1	0.13	0.11	0.101	0.114	0.104	0.145	0.106	0.124	0.129
LOS ANGELES-LONG BEACH, CA												
CO	2nd max 8-hour	Down	13	8.962	8.8	7.815	6.808	8.015	7.469	6.846	6.562	6.069
Pb	max quarterly mean	Down	6	0.093	0.102	0.079	0.064	0.061	0.049	0.046	0.052	0.038
NO ₂	arithmetic mean	Down	13	0.041	0.041	0.038	0.036	0.039	0.038	0.035	0.033	0.035
O ₃	4th max 8-hour	Down	14	0.119	0.125	0.129	0.117	0.113	0.105	0.101	0.091	0.098
	2nd daily max 1-hour	Down	14	0.185	0.194	0.2	0.174	0.169	0.152	0.142	0.124	0.147
PM ₁₀	90th percentile	Down	9	78	79.556	64.111	65.333	59.111	63.556	60.667	56.556	54.778
	weighted annual mean	Down	9	48.667	52.522	41.078	40.467	39.144	39.156	37.967	38.556	33.411
SO ₂	arithmetic mean	Down	4	0.003	0.003	0.004	0.003	0.003	0.003	0.003	0.003	0.003
	2nd max 24-hour	NS	4	0.012	0.013	0.015	0.011	0.008	0.008	0.008	0.007	0.009

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
LOUISVILLE, KY-IN													
CO	2nd max 8-hour	Down	4	5.85	5.85	5.15	5.35	5.875	4.4	3.9	4.95	4.375	
NO ₂	arithmetic mean	NS	1	0.012	0.012	0.013	0.014	0.012	0.013	0.013	0.012	0.014	
O ₃	4th max 8-hour	up	5	0.079	0.086	0.071	0.091	0.092	0.09	0.087	0.089	0.096	
	2nd daily max 1-hour	NS	5	0.107	0.108	0.091	0.123	0.116	0.116	0.109	0.12	0.121	
PM ₁₀	90th percentile	Down	6	54.667	49.833	47.5	50.833	47	46.167	43.667	48.167	41.833	
	weighted annual mean	Down	6	32.767	32.25	30.3	29.117	30.283	28.65	26.483	28.717	26.333	
SO ₂	arithmetic mean	Down	4	0.01	0.01	0.009	0.01	0.01	0.008	0.007	0.007	0.007	
	2nd max 24-hour	Down	4	0.041	0.037	0.034	0.035	0.04	0.028	0.031	0.031	0.033	
LOWELL, MA-NH													
CO	2nd max 8-hour	Down	1	7.3	5.8	5.9	5.1	6.5	7.8	4.5	3.6	3.4	
LUBBOCK, TX													
PM ₁₀	90th percentile	Down	1	36	39	34	30	33	34	34	27	27	
	weighted annual mean	Down	1	23.8	25.3	22.1	19.9	23	20.8	21.7	16.6	16.6	16.6
LYNCHBURG, VA													
PM ₁₀	90th percentile	NS	1	43	41	39	44	33	49	36	37	33	
	weighted annual mean	Down	1	24.3	27.5	23.5	25.5	23.2	23.8	22.5	23	20.8	20.8
MADISON, WI													
O ₃	4th max 8-hour	NS	1	0.079	0.079	0.079	0.066	0.071	0.08	0.079	0.079	0.076	
	2nd daily max 1-hour	NS	1	0.094	0.094	0.094	0.079	0.082	0.1	0.094	0.088	0.089	
PM ₁₀	90th percentile	NS	2	37	38	35	36.5	32.5	42	30.5	33.5	36.5	
	weighted annual mean	NS	2	22.95	23.75	22	20.15	21.3	22.15	20.05	20.15	23.35	
MANCHESTER, NH													
PM ₁₀	90th percentile	Down	2	33.5	37.5	31	36.5	33.5	26	28	28.5	26.5	
	weighted annual mean	Down	2	19.55	19.9	18.2	17.95	15.25	14.25	16	18.55	15.05	15.6
MANSFIELD, OH													
PM ₁₀	90th percentile	NS	1	42	40	39	44	49	42	40	39	41	
	weighted annual mean	Down	1	27.1	26.7	26.4	27.7	29.2	24.7	24.3	23.3	23.8	22.6
MEDFORD-ASHLAND, OR													
CO	2nd max 8-hour	Down	1	8.2	8.1	6.4	6.9	6.2	5.3	6.4	5.7	5.2	
O ₃	4th max 8-hour	NS	1	0.081	0.081	0.081	0.066	0.068	0.071	0.075	0.063	0.085	
	2nd daily max 1-hour	NS	1	0.112	0.112	0.112	0.082	0.087	0.091	0.101	0.074	0.117	
PM ₁₀	90th percentile	Down	4	66.75	62.25	51.75	52.5	46.75	36	35	36.25	32.5	
	weighted annual mean	Down	4	35.35	34.35	30.675	29.725	27.95	21.75	20.975	22.775	20.925	
MELBOURNE-TITUSVILLE-PALM BAY, FL													
O ₃	4th max 8-hour	NS	2	0.074	0.068	0.075	0.073	0.073	0.066	0.068	0.073	0.081	
	2nd daily max 1-hour	NS	2	0.084	0.085	0.084	0.087	0.088	0.08	0.087	0.086	0.092	
PM ₁₀	90th percentile	NS	2	29.5	29.5	29.5	27	23.5	23	25	27.5	32	
	weighted annual mean	NS	2	16.55	16.55	16.55	17.65	16.5	15.15	16.85	17.6	18.2	
MEMPHIS, TN-AR-MS													
CO	2nd max 8-hour	Down	5	7.46	6.14	7.66	7.64	7.28	5.96	5.28	4.96	4.86	
Pb	max quarterly mean	NS	4	1.041	0.785	1.003	1.045	1.033	0.646	1.044	0.593	0.933	
NO ₂	arithmetic mean	up	1	0.023	0.024	0.026	0.026	0.027	0.027	0.024	0.028	0.029	
O ₃	4th max 8-hour	up	4	0.088	0.085	0.08	0.084	0.085	0.095	0.094	0.087	0.093	
	2nd daily max 1-hour	up	4	0.113	0.108	0.102	0.108	0.108	0.125	0.124	0.118	0.116	
PM ₁₀	90th percentile	Down	2	50	45	43.5	49	43	44.5	40	43.5	40.5	
	weighted annual mean	Down	2	30.6	26.95	28.4	28.5	26.65	27.45	27.45	26	24.65	24.35
SO ₂	arithmetic mean	Down	1	0.009	0.008	0.009	0.007	0.005	0.005	0.004	0.004	0.004	0.004
	2nd max 24-hour	Down	1	0.027	0.024	0.03	0.031	0.025	0.019	0.012	0.012	0.012	0.012
MERCED, CA													
NO ₂	arithmetic mean	Down	1	0.015	0.015	0.015	0.015	0.013	0.012	0.012	0.013	0.011	
O ₃	4th max 8-hour	NS	1	0.102	0.102	0.102	0.096	0.097	0.107	0.102	0.074	0.112	
	2nd daily max 1-hour	NS	1	0.12	0.12	0.12	0.12	0.119	0.13	0.124	0.09	0.14	
MIAMI, FL													
CO	2nd max 8-hour	Down	2	5.95	7.2	6.2	5.25	4.4	4.9	4.45	3.8	3.1	
NO ₂	arithmetic mean	NS	2	0.011	0.011	0.011	0.012	0.01	0.011	0.011	0.012	0.011	
O ₃	4th max 8-hour	NS	4	0.067	0.06	0.071	0.075	0.07	0.07	0.069	0.072	0.08	
	2nd daily max 1-hour	NS	4	0.098	0.091	0.095	0.101	0.093	0.094	0.092	0.098	0.099	
PM ₁₀	90th percentile	Down	4	38	38	39.5	36.25	34.75	33.75	38.25	30.25	35.25	
	weighted annual mean	Down	4	27	25.725	25.95	26.85	25.075	25.05	25.7	23	25.75	
SO ₂	arithmetic mean	NS	1	0.001	0.001	0.001	0.001	0.001	0.002	0.002	0.001	0.001	
	2nd max 24-hour	NS	1	0.003	0.003	0.005	0.004	0.004	0.004	0.005	0.004	0.003	
MIDDLESEX-SOMERSET-HUNTERDON, NJ													
CO	2nd max 8-hour	Down	1	5.4	4.2	3.9	3.7	4.3	5.3	3.3	3.8	3	
Pb	max quarterly mean	NS	1	0.302	1.148	1.215	0.333	0.123	0.067	0.061	0.079	0.08	
O ₃	4th max 8-hour	NS	1	0.11	0.109	0.094	0.102	0.094	0.102	0.089	0.103	0.096	
	2nd daily max 1-hour	NS	1	0.136	0.122	0.119	0.118	0.112	0.115	0.108	0.12	0.118	
SO ₂	arithmetic mean	Down	1	0.007	0.007	0.006	0.005	0.005	0.004	0.005	0.005	0.005	
	2nd max 24-hour	Down	1	0.032	0.025	0.026	0.018	0.028	0.018	0.024	0.019	0.018	

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
MILWAUKEE-WAUKESHA, WI													
CO	2nd max 8-hour	Down	5	4.48	3.72	3.24	4.04	4.5	3.04	1.9	1.98	2.08	1.94
Pb	max quarterly mean	Down	1	0.081	0.055	0.047	0.035	0.032	0.048	0.032	0.03	0.03	0.03
NO ₂	arithmetic mean	Down	1	0.019	0.018	0.018	0.017	0.017	0.017	0.017	0.016	0.016	0.016
O ₃	4th max 8-hour	NS	8	0.084	0.094	0.078	0.076	0.081	0.096	0.083	0.083	0.082	0.091
	2nd daily max 1-hour	NS	8	0.113	0.136	0.096	0.097	0.117	0.114	0.105	0.117	0.109	0.111
PM ₁₀	90th percentile	Down	4	57.25	48.75	41	44.5	42.25	49	37.5	38.25	41.25	40.5
	weighted annual mean	Down	4	33.2	29.3	25.775	26.1	27.525	26.55	25	24.275	26.85	24.05
SO ₂	arithmetic mean	NS	1	0.006	0.005	0.004	0.003	0.004	0.004	0.004	0.004	0.004	0.004
	2nd max 24-hour	NS	1	0.04	0.029	0.023	0.018	0.032	0.025	0.028	0.028	0.022	0.024
MINNEAPOLIS-ST. PAUL, MN-WI													
CO	2nd max 8-hour	Down	3	6.533	7.167	5.867	5.233	6.4	5.967	5.133	4.5	4.933	4.033
Pb	max quarterly mean	Down	4	0.588	0.246	0.197	0.093	0.052	0.181	0.092	0.072	0.05	0.127
NO ₂	arithmetic mean	NS	1	0.017	0.016	0.016	0.018	0.019	0.017	0.019	0.017	0.018	0.016
O ₃	4th max 8-hour	NS	4	0.068	0.07	0.074	0.058	0.07	0.076	0.068	0.073	0.071	0.073
	2nd daily max 1-hour	NS	4	0.087	0.081	0.086	0.074	0.08	0.101	0.086	0.085	0.089	0.083
PM ₁₀	90th percentile	NS	7	43.429	42.286	37.286	34.571	35.286	39.571	35.857	34.286	39.429	39.429
	weighted annual mean	NS	7	27.871	26.443	22.843	22.057	21.829	22.886	22.6	22.271	23.843	24.257
SO ₂	arithmetic mean	Down	6	0.004	0.005	0.004	0.003	0.003	0.003	0.003	0.003	0.002	0.002
	2nd max 24-hour	Down	6	0.025	0.027	0.025	0.02	0.017	0.015	0.016	0.015	0.013	0.014
MOBILE, AL													
O ₃	4th max 8-hour	NS	2	0.081	0.054	0.075	0.071	0.071	0.077	0.077	0.076	0.088	0.082
	2nd daily max 1-hour	NS	2	0.105	0.075	0.098	0.09	0.088	0.108	0.102	0.107	0.107	0.107
PM ₁₀	90th percentile	Down	4	49.5	48.5	51.25	51.25	51	42.75	39.75	44.5	46.75	38
	weighted annual mean	Down	4	30.65	31.85	33.7	32.4	31.4	28.8	24.6	26.35	29.975	24.5
SO ₂	arithmetic mean	NS	1	0.008	0.009	0.01	0.01	0.011	0.009	0.009	0.008	0.009	0.008
	2nd max 24-hour	NS	1	0.038	0.05	0.054	0.066	0.052	0.053	0.07	0.049	0.073	0.041
MODESTO, CA													
CO	2nd max 8-hour	Down	2	7.3	6.75	5	4.65	5.1	4.2	4.3	3.7	4.3	4.85
Pb	max quarterly mean	Down	1	0.036	0.036	0.019	0.018	0.019	0.012	0.01	0.011	0.011	0.011
NO ₂	arithmetic mean	Down	2	0.023	0.023	0.021	0.02	0.02	0.019	0.019	0.019	0.019	0.02
O ₃	4th max 8-hour	NS	2	0.096	0.091	0.089	0.093	0.09	0.099	0.096	0.086	0.103	0.089
	2nd daily max 1-hour	NS	2	0.115	0.11	0.11	0.12	0.112	0.125	0.124	0.11	0.14	0.109
PM ₁₀	90th percentile	Down	2	85	101	68.5	72	54	68	40.5	47.5	37.5	37.5
	weighted annual mean	Down	2	43.85	48.4	39.45	40.15	37	34.3	28.35	29.6	22.55	22.55
MONMOUTH-OCEAN, NJ													
CO	2nd max 8-hour	Down	2	5.7	5.45	4.65	5.3	4.9	3.75	4.4	3.65	3	3.3
O ₃	4th max 8-hour	NS	2	0.098	0.101	0.09	0.099	0.092	0.115	0.095	0.104	0.099	0.1
	2nd daily max 1-hour	NS	2	0.134	0.14	0.133	0.129	0.117	0.148	0.121	0.141	0.132	0.127
MONTGOMERY, AL													
O ₃	4th max 8-hour	NS	1	0.078	0.067	0.076	0.085	0.078	0.088	0.076	0.07	0.091	0.077
	2nd daily max 1-hour	NS	1	0.097	0.088	0.095	0.113	0.101	0.102	0.102	0.087	0.116	0.096
PM ₁₀	90th percentile	NS	1	41	44	39	34	36	43	37	40	39	38
	weighted annual mean	NS	1	26.9	25.8	24.2	22.8	25	26.1	22.5	23.9	27.8	23.9
MYRTLE BEACH, SC													
Pb	max quarterly mean	NS	1	0.013	0.013	0.011	0.007	0.005	0.007	0.003	0.006	0.01	0.009
NASHUA, NH													
CO	2nd max 8-hour	Down	2	7.05	6.85	6.8	5.15	7.45	6.75	7.7	4.65	4.45	4.4
NO ₂	arithmetic mean	NS	1	0.016	0.016	0.015	0.016	0.015	0.014	0.019	0.016	0.015	0.015
O ₃	4th max 8-hour	NS	2	0.08	0.089	0.084	0.085	0.081	0.083	0.083	0.088	0.073	0.076
	2nd daily max 1-hour	NS	2	0.096	0.103	0.098	0.113	0.099	0.102	0.101	0.109	0.089	0.089
PM ₁₀	90th percentile	Down	3	32	34	29	27.667	31	25	28.667	29	27.333	26.333
	weighted annual mean	Down	3	17.7	19.067	16.867	16.033	14.133	13.467	15.733	17.267	15.667	15.533
SO ₂	arithmetic mean	NS	3	0.007	0.005	0.006	0.006	0.006	0.005	0.005	0.006	0.005	0.005
	2nd max 24-hour	Down	3	0.036	0.024	0.025	0.022	0.028	0.023	0.021	0.025	0.019	0.019
NASHVILLE, TN													
CO	2nd max 8-hour	Down	3	5.933	5	5.533	6.4	5.433	4.833	3.867	4.733	4.367	4.433
Pb	max quarterly mean	Down	5	1.257	1.064	0.989	0.887	0.933	1.784	0.574	0.633	0.74	0.502
NO ₂	arithmetic mean	NS	1	0.012	0.01	0.014	0.012	0.02	0.014	0.012	0.012	0.011	0.019
O ₃	4th max 8-hour	up	6	0.089	0.08	0.075	0.079	0.083	0.086	0.087	0.09	0.091	0.095
	2nd daily max 1-hour	up	6	0.113	0.099	0.098	0.104	0.103	0.103	0.108	0.112	0.113	0.119
PM ₁₀	90th percentile	Down	6	56.833	51.667	47.833	47.167	51	50	43.167	46.667	44.833	44
	weighted annual mean	Down	6	36.367	34.75	30.55	30.95	30.217	30.733	28.383	28.183	28.067	27.217
SO ₂	arithmetic mean	Down	2	0.013	0.012	0.008	0.01	0.007	0.005	0.006	0.006	0.005	0.004
	2nd max 24-hour	NS	2	0.08	0.078	0.028	0.063	0.041	0.025	0.049	0.059	0.035	0.029
NASSAU-SUFFOLK, NY													
CO	2nd max 8-hour	Down	1	7.2	6.6	5.6	5.6	5.4	5	4.9	4.7	4	4.5
NO ₂	arithmetic mean	Down	1	0.028	0.029	0.026	0.026	0.028	0.025	0.026	0.025	0.022	0.024
O ₃	4th max 8-hour	NS	2	0.1	0.1	0.09	0.097	0.09	0.109	0.089	0.102	0.093	0.099
	2nd daily max 1-hour	NS	2	0.132	0.147	0.123	0.13	0.121	0.141	0.118	0.133	0.126	0.13
PM ₁₀	90th percentile	Down	2	53.5	53.5	38	41.5	38.5	32.5	28.5	33.5	30	28
	weighted annual mean	Down	2	26.85	26.85	22.25	23.05	22.65	19.1	18.05	20.25	18.4	17.3
SO ₂	arithmetic mean	Down	2	0.009	0.009	0.008	0.008	0.007	0.005	0.007	0.006	0.006	0.007
	2nd max 24-hour	Down	2	0.045	0.039	0.033	0.033	0.037	0.03	0.028	0.029	0.028	0.032

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
NEW BEDFORD, MA												
O ₃	4th max 8-hour	NS	1	0.099	0.101	0.087	0.073	0.077	0.107	0.092	0.092	0.083
	2nd daily max 1-hour	NS	1	0.126	0.132	0.109	0.088	0.096	0.138	0.118	0.123	0.101
PM ₁₀	90th percentile	NS	1	34	35	29	24	37	21	27	29	25
	weighted annual mean	Down	1	23	20.4	17.4	16.8	19.1	14.3	16.1	17.8	16
NEW HAVEN-MERIDEN, CT												
NO ₂	arithmetic mean	NS	1	0.027	0.028	0.025	0.027	0.03	0.025	0.026	0.024	0.027
O ₃	4th max 8-hour	NS	2	0.1	0.116	0.084	0.094	0.088	0.105	0.085	0.099	0.088
	2nd daily max 1-hour	NS	2	0.129	0.161	0.115	0.137	0.137	0.144	0.113	0.136	0.124
PM ₁₀	90th percentile	Down	6	48.833	57.667	46	51.167	51.833	40.5	36.167	35.667	36.167
	weighted annual mean	Down	6	30.033	33.483	26.733	28.583	29.067	23.617	22.217	22.567	23.117
SO ₂	arithmetic mean	Down	2	0.01	0.01	0.009	0.008	0.008	0.006	0.006	0.005	0.005
	2nd max 24-hour	Down	2	0.045	0.055	0.042	0.038	0.049	0.031	0.027	0.028	0.028
NEW LONDON-NORWICH, CT-RI												
O ₃	4th max 8-hour	NS	1	0.105	0.107	0.088	0.099	0.093	0.101	0.095	0.104	0.083
	2nd daily max 1-hour	NS	1	0.158	0.135	0.12	0.126	0.118	0.14	0.121	0.15	0.116
PM ₁₀	90th percentile	Down	2	34.5	40	32	30.5	38.5	28.5	30.5	28.5	27.5
	weighted annual mean	Down	2	20.65	23.55	19.75	18.25	22.1	17.2	18.8	18.3	17.35
SO ₂	arithmetic mean	Down	1	0.008	0.007	0.006	0.006	0.005	0.005	0.005	0.004	0.004
	2nd max 24-hour	Down	1	0.029	0.027	0.025	0.019	0.029	0.017	0.016	0.022	0.018
NEW ORLEANS, LA												
CO	2nd max 8-hour	Down	2	4.85	4.15	5.35	5.1	4.6	3.55	3.95	3.25	3.15
Pb	max quarterly mean	NS	1	0.049	0.049	0.049	0.073	0.12	0.411	0.093	0.053	0.114
NO ₂	arithmetic mean	NS	2	0.016	0.015	0.017	0.016	0.015	0.016	0.015	0.014	0.016
O ₃	4th max 8-hour	up	6	0.079	0.072	0.077	0.079	0.082	0.083	0.08	0.078	0.081
	2nd daily max 1-hour	NS	6	0.104	0.1	0.101	0.104	0.11	0.11	0.103	0.1	0.108
PM ₁₀	90th percentile	Down	1	44	48	39	42	40	37	31	36	36
	weighted annual mean	NS	1	27.2	26.3	26.6	24.7	25.3	24.3	22.3	25.2	25.2
SO ₂	arithmetic mean	NS	1	0.003	0.005	0.005	0.006	0.008	0.007	0.006	0.005	0.004
	2nd max 24-hour	NS	1	0.013	0.028	0.019	0.025	0.027	0.022	0.035	0.017	0.026
NEW YORK, NY												
CO	2nd max 8-hour	Down	5	7.1	6.7	6.1	5.26	5.94	6.52	4.56	3.64	3.72
Pb	max quarterly mean	NS	1	0.164	0.124	0.106	0.163	0.14	0.124	0.156	0.155	0.137
NO ₂	arithmetic mean	Down	2	0.043	0.043	0.037	0.04	0.042	0.039	0.039	0.038	0.037
O ₃	4th max 8-hour	NS	5	0.098	0.105	0.078	0.087	0.092	0.096	0.088	0.103	0.09
	2nd daily max 1-hour	NS	5	0.13	0.141	0.116	0.115	0.12	0.122	0.117	0.131	0.116
PM ₁₀	90th percentile	NS	12	51.917	46.167	40.5	41	46.583	40.583	39.583	40.833	41.417
	weighted annual mean	Down	12	30.6	29.225	26.25	25.433	27.925	25.325	26.133	25.933	25.125
SO ₂	arithmetic mean	Down	7	0.014	0.014	0.013	0.012	0.013	0.01	0.01	0.009	0.008
	2nd max 24-hour	Down	7	0.054	0.048	0.051	0.039	0.054	0.038	0.04	0.033	0.03
NEWARK, NJ												
CO	2nd max 8-hour	Down	3	7.1	8.333	5.633	4.933	7.667	6.033	5.067	4.6	3.667
NO ₂	arithmetic mean	NS	4	0.029	0.028	0.03	0.028	0.03	0.028	0.029	0.028	0.029
O ₃	4th max 8-hour	NS	2	0.096	0.105	0.085	0.092	0.09	0.105	0.087	0.097	0.092
	2nd daily max 1-hour	NS	2	0.127	0.125	0.105	0.115	0.114	0.12	0.115	0.11	0.116
PM ₁₀	90th percentile	NS	3	55	52.333	44	52	57.333	46	48.667	48.667	44.667
	weighted annual mean	NS	3	30.633	29.9	28.733	30.133	34.567	27.833	31.4	30.933	27.8
SO ₂	arithmetic mean	Down	4	0.01	0.01	0.009	0.007	0.008	0.006	0.006	0.006	0.006
	2nd max 24-hour	Down	4	0.04	0.035	0.04	0.025	0.033	0.025	0.027	0.023	0.021
NEWBURGH, NY-PA												
Pb	max quarterly mean	Down	2	1.01	0.655	0.577	0.344	0.081	0.079	0.059	0.198	0.1
NORFOLK-VIRGINIA BEACH-NEWPORT NEWS, VA-N												
CO	2nd max 8-hour	NS	3	4.533	5.133	4.333	4.967	5.367	4.267	4.3	4.033	4.633
NO ₂	arithmetic mean	NS	1	0.019	0.02	0.02	0.021	0.019	0.018	0.018	0.019	0.017
O ₃	4th max 8-hour	NS	3	0.085	0.083	0.086	0.094	0.081	0.083	0.077	0.092	0.088
	2nd daily max 1-hour	NS	3	0.104	0.103	0.125	0.119	0.101	0.105	0.094	0.111	0.103
PM ₁₀	90th percentile	NS	2	37.5	43	36	41	30.5	34	33	35.5	36
	weighted annual mean	NS	2	24.5	25.15	21.6	23.45	19.8	19.7	20.8	21.6	21.85
SO ₂	arithmetic mean	Down	2	0.007	0.007	0.006	0.007	0.007	0.006	0.006	0.006	0.006
	2nd max 24-hour	Down	2	0.025	0.022	0.024	0.026	0.024	0.022	0.022	0.025	0.02
OAKLAND, CA												
CO	2nd max 8-hour	Down	5	4.92	4.98	4.14	3.54	3.72	2.82	2.96	3	2.98
Pb	max quarterly mean	Down	2	0.073	0.061	0.022	0.024	0.017	0.028	0.012	0.008	0.008
NO ₂	arithmetic mean	Down	2	0.021	0.022	0.02	0.02	0.02	0.019	0.018	0.017	0.019
O ₃	4th max 8-hour	NS	7	0.062	0.065	0.067	0.069	0.065	0.082	0.073	0.06	0.069
	2nd daily max 1-hour	NS	7	0.097	0.1	0.097	0.106	0.099	0.133	0.107	0.094	0.104
PM ₁₀	90th percentile	Down	3	58.667	64.667	41.333	39	38	36.667	34.667	32.667	28.667
	weighted annual mean	Down	3	32.267	34.1	26.767	23.733	23.8	21.167	21.967	21.733	19.033
SO ₂	arithmetic mean	NS	3	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	NS	3	0.011	0.01	0.009	0.01	0.007	0.007	0.007	0.008	0.009

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
OKLAHOMA CITY, OK												
CO	2nd max 8-hour	Down	2	4.5	3.9	4.3	5.15	4.25	3.8	3.95	4	3.35
Pb	max quarterly mean	Down	1	0.036	0.039	0.029	0.017	0.013	0.017	0.008	0.001	0.001
NO ₂	arithmetic mean	NS	3	0.012	0.011	0.011	0.011	0.012	0.012	0.012	0.013	0.012
O ₃	4th max 8-hour	up	4	0.075	0.078	0.073	0.071	0.078	0.085	0.078	0.08	0.086
	2nd daily max 1-hour	NS	4	0.098	0.099	0.093	0.092	0.093	0.11	0.094	0.098	0.107
PM ₁₀	90th percentile	NS	4	36	34.5	34	34.25	33.75	37.5	39	38.5	38.5
	weighted annual mean	NS	4	21.525	22.2	21.65	20.875	21.05	21.425	24.225	21.85	21.85
OLYMPIA, WA												
PM ₁₀	90th percentile	Down	1	44	43	42	49	30	35	30	36	22
	weighted annual mean	Down	1	23.6	25	23.8	23.8	17.4	17.2	15.6	16.4	14.2
OMAHA, NE-IA												
CO	2nd max 8-hour	NS	2	5.15	5.8	5.9	5.3	3.95	5.5	4.85	4.2	5.3
Pb	max quarterly mean	NS	6	0.841	0.752	1.329	1.29	1.684	1.032	1.003	0.348	0.046
O ₃	4th max 8-hour	NS	3	0.06	0.064	0.063	0.05	0.06	0.063	0.056	0.062	0.064
	2nd daily max 1-hour	NS	3	0.069	0.077	0.076	0.059	0.073	0.077	0.068	0.072	0.077
PM ₁₀	90th percentile	NS	7	63.286	58.571	62.429	47.857	51.857	51.857	49.143	51.571	60.429
	weighted annual mean	NS	7	37.157	36.357	35.529	31	32.957	29.586	32.7	32.714	34.486
ORANGE COUNTY, CA												
CO	2nd max 8-hour	Down	4	8.275	6.95	7.475	5.8	7.325	5.725	5.75	4.775	5
NO ₂	arithmetic mean	Down	3	0.039	0.038	0.034	0.032	0.034	0.033	0.029	0.028	0.029
O ₃	4th max 8-hour	Down	4	0.106	0.099	0.105	0.094	0.097	0.084	0.082	0.073	0.084
	2nd daily max 1-hour	Down	4	0.173	0.18	0.17	0.15	0.155	0.12	0.12	0.108	0.138
PM ₁₀	90th percentile	NS	2	75	67.5	53	57	53.5	68	46.5	50	52
	weighted annual mean	NS	2	45.45	41.25	37.2	36.3	35.6	40.55	32.65	37	33.3
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.002	0.002	0.002	0.003	0.001	0.001	0.002
	2nd max 24-hour	Down	1	0.008	0.007	0.008	0.006	0.005	0.005	0.004	0.006	0.005
ORLANDO, FL												
CO	2nd max 8-hour	Down	2	4.45	3.55	3.85	3.8	3.6	3.3	3.25	3.55	2.95
NO ₂	arithmetic mean	NS	1	0.012	0.012	0.011	0.012	0.011	0.01	0.013	0.013	0.011
O ₃	4th max 8-hour	NS	3	0.081	0.07	0.081	0.081	0.079	0.075	0.074	0.078	0.087
	2nd daily max 1-hour	NS	3	0.112	0.093	0.1	0.098	0.098	0.097	0.097	0.1	0.106
PM ₁₀	90th percentile	NS	5	35.2	33.8	34.6	31.2	29.4	30	31.8	30.8	34.4
	weighted annual mean	NS	5	24.5	24.56	22.8	21.68	21.08	20.14	21.36	21.84	22.98
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
	2nd max 24-hour	NS	1	0.011	0.007	0.007	0.011	0.012	0.006	0.008	0.006	0.007
OWENSBORO, KY												
NO ₂	arithmetic mean	NS	1	0.011	0.011	0.012	0.012	0.012	0.013	0.011	0.013	0.011
O ₃	4th max 8-hour	NS	1	0.086	0.075	0.075	0.081	0.092	0.088	0.086	0.087	0.086
	2nd daily max 1-hour	NS	1	0.11	0.09	0.085	0.106	0.107	0.109	0.107	0.108	0.11
PM ₁₀	90th percentile	NS	3	45.333	44.667	45	44.667	44.667	48.333	41.333	42	43.333
	weighted annual mean	Down	3	29.033	29.233	26.7	25.1	28.7	27	24.167	24.267	24.633
SO ₂	arithmetic mean	Down	1	0.009	0.009	0.009	0.009	0.009	0.007	0.007	0.007	0.006
	2nd max 24-hour	Down	1	0.038	0.044	0.053	0.05	0.035	0.028	0.02	0.027	0.023
PARKERSBURG-MARIETTA, WV-OH												
Pb	max quarterly mean	NS	1	0.019	0.015	0.024	0.017	0.014	0.019	0.023	0.011	0.011
O ₃	4th max 8-hour	NS	2	0.084	0.102	0.08	0.092	0.095	0.097	0.088	0.085	0.093
	2nd daily max 1-hour	NS	2	0.113	0.12	0.156	0.114	0.113	0.117	0.107	0.106	0.121
PM ₁₀	90th percentile	NS	1	46	46	46	51	51	40	34	39	36
	weighted annual mean	Down	1	27.2	27.2	27.2	29.2	27.3	25.3	22.7	23.1	23.1
SO ₂	arithmetic mean	NS	1	0.014	0.014	0.014	0.014	0.017	0.01	0.01	0.01	0.013
	2nd max 24-hour	NS	1	0.064	0.06	0.059	0.065	0.084	0.041	0.046	0.052	0.089
PENSACOLA, FL												
O ₃	4th max 8-hour	NS	2	0.088	0.075	0.087	0.08	0.085	0.083	0.079	0.085	0.095
	2nd daily max 1-hour	NS	2	0.112	0.103	0.104	0.102	0.108	0.117	0.098	0.11	0.121
SO ₂	arithmetic mean	Down	2	0.008	0.007	0.008	0.006	0.005	0.003	0.004	0.004	0.004
	2nd max 24-hour	Down	2	0.074	0.063	0.063	0.047	0.045	0.023	0.024	0.031	0.023
PEORIA-PEKIN, IL												
CO	2nd max 8-hour	Down	1	7.4	6.3	7.2	7.3	5.7	5.6	4.6	4.7	5.8
Pb	max quarterly mean	Down	1	0.035	0.021	0.024	0.032	0.019	0.026	0.024	0.019	0.017
O ₃	4th max 8-hour	NS	2	0.071	0.079	0.075	0.064	0.075	0.082	0.081	0.072	0.076
	2nd daily max 1-hour	NS	2	0.084	0.096	0.09	0.079	0.089	0.094	0.089	0.086	0.085
PM ₁₀	90th percentile	Down	2	45	42.5	44.5	36.5	40.5	40	33.5	40	40.5
	weighted annual mean	NS	2	27.45	26.35	28.25	21.55	23.3	21.55	22.35	26.45	25.9
SO ₂	arithmetic mean	NS	2	0.007	0.008	0.007	0.007	0.007	0.007	0.007	0.007	0.006
	2nd max 24-hour	Down	2	0.055	0.065	0.043	0.039	0.05	0.084	0.045	0.042	0.041

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
PHILADELPHIA, PA-NJ												
CO	2nd max 8-hour	Down	9	4.933	4.578	4.722	4.689	5.222	4.089	4.189	3.322	3.1
Pb	max quarterly mean	NS	10	0.535	0.354	0.563	0.856	0.537	0.694	0.921	0.769	0.273
NO ₂	arithmetic mean	NS	7	0.025	0.025	0.025	0.025	0.026	0.025	0.026	0.025	0.023
O ₃	4th max 8-hour	NS	8	0.103	0.109	0.09	0.099	0.091	0.106	0.093	0.103	0.097
	2nd daily max 1-hour	NS	8	0.132	0.135	0.113	0.127	0.117	0.13	0.12	0.125	0.118
PM ₁₀	90th percentile	Down	7	54.143	56.714	44	50.143	55.714	51.286	46.857	50.571	45.429
	weighted annual mean	Down	7	31.286	33.9	28.629	29.543	32.714	29.914	29.471	29.471	27.329
SO ₂	arithmetic mean	Down	13	0.01	0.009	0.008	0.008	0.009	0.007	0.007	0.007	0.006
	2nd max 24-hour	Down	13	0.039	0.034	0.034	0.031	0.04	0.028	0.026	0.027	0.024
PHOENIX-MESA, AZ												
CO	2nd max 8-hour	Down	8	6.65	6.225	6.463	5.988	6.263	6.15	5.65	5.1	5.3
Pb	max quarterly mean	Down	2	0.085	0.105	0.058	0.054	0.047	0.059	0.044	0.023	0.023
O ₃	4th max 8-hour	NS	8	0.079	0.074	0.081	0.081	0.08	0.087	0.086	0.08	0.081
	2nd daily max 1-hour	NS	8	0.109	0.101	0.113	0.111	0.111	0.119	0.109	0.102	0.104
PM ₁₀	90th percentile	NS	8	67	66.375	63.125	60.875	62	64.875	61.375	69.875	63.063
	weighted annual mean	NS	8	42.925	43.05	40.4	41.138	40.213	41.275	41.288	46.075	37.794
SO ₂	arithmetic mean	NS	1	0.003	0.005	0.004	0.003	0.003	0.002	0.003	0.004	0.003
	2nd max 24-hour	NS	1	0.011	0.013	0.01	0.009	0.009	0.008	0.017	0.009	0.011
PINE BLUFF, AR												
PM ₁₀	90th percentile	up	1	39	30	38	39	39	56	39	41	41
	weighted annual mean	up	1	20.9	19.1	21.9	23.4	24.7	26.4	23.3	24.5	24.5
PITTSBURGH, PA												
CO	2nd max 8-hour	Down	5	5.56	4.26	4.8	3.76	4.26	3.82	3.26	2.52	2.56
Pb	max quarterly mean	Down	4	0.088	0.087	0.067	0.066	0.084	0.061	0.042	0.049	0.044
NO ₂	arithmetic mean	Down	5	0.023	0.023	0.022	0.022	0.023	0.021	0.021	0.02	0.022
O ₃	4th max 8-hour	NS	8	0.081	0.092	0.074	0.088	0.093	0.099	0.089	0.093	0.097
	2nd daily max 1-hour	up	8	0.1	0.11	0.091	0.11	0.114	0.123	0.105	0.117	0.114
PM ₁₀	90th percentile	Down	19	60.842	59.211	54.605	54.368	62.263	54.579	48.947	51.105	48.368
	weighted annual mean	Down	19	20.174	20.132	18.121	17.489	19.495	17.105	16.521	16.737	16.174
SO ₂	arithmetic mean	Down	16	0.016	0.015	0.015	0.015	0.015	0.011	0.011	0.011	0.01
	2nd max 24-hour	Down	16	0.071	0.058	0.072	0.061	0.073	0.044	0.043	0.046	0.037
PITTSFIELD, MA												
O ₃	4th max 8-hour	Down	1	0.092	0.092	0.087	0.083	0.074	0.072	0.081	0.078	0.071
	2nd daily max 1-hour	NS	1	0.105	0.103	0.109	0.112	0.085	0.086	0.108	0.087	0.092
POCATELLO, ID												
PM ₁₀	90th percentile	Down	4	54	61	61.5	54.75	49.25	40.5	44.25	37.25	35.75
	weighted annual mean	Down	4	32.825	34.15	41.675	36.975	29.45	23.85	25.125	23.125	22.4
PONCE, PR												
PM ₁₀	90th percentile	NS	1	47	47	49	53	38	33	35	47	51
	weighted annual mean	NS	1	29.7	29.7	29.4	29.9	26.8	24.1	24.3	28.7	27.5
PORTLAND, ME												
O ₃	4th max 8-hour	NS	1	0.092	0.109	0.097	0.089	0.088	0.096	0.083	0.103	0.089
	2nd daily max 1-hour	NS	1	0.125	0.141	0.118	0.112	0.122	0.116	0.1	0.13	0.12
PM ₁₀	90th percentile	NS	2	39	43.5	38	44	42.5	50	36	42.5	38.5
	weighted annual mean	NS	2	25.05	26.15	23.45	25.2	23.8	27.5	23.75	26.05	20.65
SO ₂	arithmetic mean	Down	1	0.01	0.009	0.008	0.009	0.008	0.006	0.005	0.005	0.005
	2nd max 24-hour	NS	1	0.034	0.032	0.029	0.032	0.043	0.022	0.021	0.023	0.025
PORTLAND-VANCOUVER, OR-WA												
CO	2nd max 8-hour	Down	2	8.45	9.1	6.95	6.3	7	5.65	6.05	5.35	5.05
O ₃	4th max 8-hour	NS	4	0.082	0.064	0.073	0.058	0.064	0.066	0.085	0.056	0.069
	2nd daily max 1-hour	NS	4	0.116	0.095	0.097	0.087	0.087	0.097	0.115	0.081	0.106
PM ₁₀	90th percentile	Down	6	42	43.333	39.167	42.5	36.833	31.333	33	31.833	30.5
	weighted annual mean	Down	6	25.1	25.633	22.683	24.85	22.75	19.583	20.067	21.367	18.833
												18.617
PORTSMOUTH-ROCHESTER, NH-ME												
NO ₂	arithmetic mean	Down	1	0.015	0.015	0.013	0.014	0.013	0.012	0.013	0.012	0.01
O ₃	4th max 8-hour	NS	2	0.081	0.101	0.087	0.089	0.092	0.092	0.083	0.096	0.085
	2nd daily max 1-hour	NS	2	0.111	0.141	0.112	0.107	0.113	0.124	0.103	0.129	0.113
PM ₁₀	90th percentile	Down	2	33	35.5	31.5	29.5	27	26	26.5	29	25.5
	weighted annual mean	Down	2	19.8	19.45	18.9	18.2	14.2	14.9	16.3	17.05	15.85
SO ₂	arithmetic mean	Down	1	0.007	0.007	0.006	0.006	0.006	0.004	0.004	0.004	0.004
	2nd max 24-hour	Down	1	0.025	0.021	0.027	0.019	0.022	0.017	0.015	0.018	0.016
PROVIDENCE-FALL RIVER-WARWICK, RI-MA												
CO	2nd max 8-hour	Down	1	7.3	7.4	6.3	5.4	6.7	7	4.4	5.6	4.7
NO ₂	arithmetic mean	NS	1	0.024	0.025	0.023	0.022	0.022	0.022	0.025	0.025	0.024
O ₃	4th max 8-hour	NS	2	0.095	0.104	0.083	0.086	0.087	0.098	0.074	0.092	0.086
	2nd daily max 1-hour	NS	2	0.131	0.138	0.114	0.109	0.118	0.127	0.1	0.112	0.109
PM ₁₀	90th percentile	Down	3	44.333	48	40	43	49	37.667	40.667	38.333	36.333
	weighted annual mean	Down	3	29.167	29.833	24.433	26.433	28.867	23.867	26.7	25.467	22.933
SO ₂	arithmetic mean	Down	3	0.01	0.01	0.009	0.008	0.008	0.005	0.006	0.006	0.005
	2nd max 24-hour	Down	3	0.037	0.036	0.042	0.033	0.033	0.023	0.028	0.029	0.027
												0.026

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
PROVO-OREM, UT													
NO ₂	arithmetic mean	NS	1	0.019	0.019	0.019	0.026	0.024	0.023	0.024	0.023	0.024	0.024
O ₃	4th max 8-hour	NS	1	0.07	0.067	0.071	0.068	0.069	0.068	0.078	0.07	0.083	0.073
	2nd daily max 1-hour	NS	1	0.093	0.084	0.089	0.084	0.084	0.083	0.097	0.08	0.102	0.096
PM ₁₀	90th percentile	Down	3	54.667	90.667	68.333	70.667	55.667	49.333	57.333	50	46.667	51.667
	weighted annual mean	Down	3	32.2	42.433	37	38.233	33.7	29	33.7	29.967	27.467	29.7
PUEBLO, CO													
PM ₁₀	90th percentile	Down	1	43	46	46	38	45	45	42	41	33	33
	weighted annual mean	Down	1	26.3	29.7	26.3	26.1	29.6	26.2	25.8	26.8	21.7	21.7
RACINE, WI													
CO	2nd max 8-hour	Down	1	5.5	5.7	4.9	4.1	4.3	4.3	3	3.1	3	2.7
O ₃	4th max 8-hour	NS	1	0.086	0.099	0.08	0.08	0.088	0.096	0.083	0.098	0.084	0.093
	2nd daily max 1-hour	NS	1	0.11	0.135	0.102	0.103	0.114	0.113	0.129	0.117	0.124	0.114
RALEIGH-DURHAM-CHAPEL HILL, NC													
CO	2nd max 8-hour	Down	2	7.15	7.2	6.45	6.25	6.3	6	5.5	6.75	5.3	5.05
O ₃	4th max 8-hour	NS	1	0.093	0.085	0.082	0.095	0.083	0.081	0.082	0.097	0.099	0.108
	2nd daily max 1-hour	NS	1	0.12	0.107	0.099	0.113	0.107	0.096	0.093	0.112	0.124	0.134
PM ₁₀	90th percentile	NS	2	44.5	40.5	35.5	39	31	33.5	39	39	40	36.5
	weighted annual mean	NS	2	28.6	25.55	24	24.75	21.8	23.3	25.1	24.6	24.4	22.15
RAPID CITY, SD													
PM ₁₀	90th percentile	Down	3	50.667	52.333	47.667	45	55.333	45.333	42.667	51.667	42.333	38
	weighted annual mean	NS	3	30.367	31.233	28.8	26.233	32.733	26.667	27.1	29.8	26.7	23.833
READING, PA													
CO	2nd max 8-hour	Down	1	6.4	4.6	4.6	3.8	5.4	3.9	3.4	3	3	3
Pb	max quarterly mean	Down	12	0.59	0.64	0.558	0.47	0.485	0.343	0.327	0.368	0.412	0.48
NO ₂	arithmetic mean	NS	1	0.022	0.022	0.02	0.021	0.023	0.021	0.022	0.021	0.021	0.021
O ₃	4th max 8-hour	NS	2	0.092	0.104	0.086	0.088	0.084	0.093	0.086	0.092	0.091	0.101
	2nd daily max 1-hour	NS	2	0.111	0.121	0.099	0.108	0.104	0.112	0.105	0.115	0.105	0.126
SO ₂	arithmetic mean	NS	2	0.01	0.01	0.009	0.009	0.011	0.009	0.009	0.009	0.009	0.009
	2nd max 24-hour	Down	2	0.035	0.034	0.033	0.033	0.04	0.033	0.036	0.03	0.024	0.026
REDDING, CA													
O ₃	4th max 8-hour	NS	1	0.078	0.066	0.069	0.064	0.078	0.074	0.073	0.067	0.078	0.084
	2nd daily max 1-hour	NS	1	0.092	0.077	0.08	0.072	0.09	0.089	0.083	0.079	0.089	0.108
PM ₁₀	90th percentile	Down	1	42	56	45	37	39	34	32	30	30	35
	weighted annual mean	Down	1	25	28.7	24.6	20.1	24.4	19.6	18.7	16.9	17.6	20
RENO, NV													
CO	2nd max 8-hour	NS	5	7.02	7.48	5.86	4.98	5.96	4.38	5.16	5.02	4.72	5.34
O ₃	4th max 8-hour	NS	4	0.074	0.07	0.07	0.062	0.07	0.07	0.072	0.065	0.072	0.071
	2nd daily max 1-hour	NS	4	0.107	0.09	0.084	0.085	0.086	0.082	0.09	0.077	0.087	0.087
PM ₁₀	90th percentile	Down	6	92	72.833	63.5	71.333	65.333	51.667	51.5	52.167	53.5	53.667
	weighted annual mean	Down	6	43.75	35.833	36.3	40.25	36.3	31.567	29.35	31.733	30.717	34.517
RICHMOND-PETERSBURG, VA													
CO	2nd max 8-hour	NS	2	4.4	3.65	2.5	3.9	3.4	2.55	2.85	3.2	2.8	2.9
NO ₂	arithmetic mean	Down	1	0.023	0.024	0.023	0.024	0.024	0.022	0.022	0.021	0.021	0.021
O ₃	4th max 8-hour	NS	4	0.083	0.085	0.086	0.098	0.085	0.09	0.083	0.097	0.095	0.097
	2nd daily max 1-hour	NS	4	0.109	0.109	0.115	0.124	0.11	0.115	0.103	0.12	0.12	0.126
PM ₁₀	90th percentile	NS	3	39.667	45	35.667	42.667	33	38.333	37	37	37.333	33.667
	weighted annual mean	Down	3	24.867	26.233	22	23.267	20.5	23.2	23.733	22.433	21.867	20.267
SO ₂	arithmetic mean	NS	2	0.006	0.005	0.007	0.006	0.005	0.006	0.005	0.005	0.005	0.005
	2nd max 24-hour	NS	2	0.027	0.024	0.022	0.028	0.023	0.02	0.025	0.021	0.022	0.021
RIVERSIDE-SAN BERNARDINO, CA													
CO	2nd max 8-hour	Down	6	4.683	5.667	4.017	3.9	3.833	3.75	3.233	3.4	3.167	2.85
Pb	max quarterly mean	NS	4	0.051	0.056	0.033	0.038	0.037	0.04	0.038	0.04	0.039	0.047
NO ₂	arithmetic mean	Down	8	0.028	0.029	0.027	0.028	0.028	0.028	0.026	0.024	0.023	0.025
O ₃	4th max 8-hour	Down	15	0.145	0.148	0.141	0.134	0.135	0.126	0.122	0.102	0.124	0.101
	2nd daily max 1-hour	Down	15	0.214	0.207	0.197	0.181	0.186	0.177	0.166	0.147	0.166	0.128
PM ₁₀	90th percentile	Down	11	90.818	83.727	70.591	72.909	65.273	68.318	62	60.636	60.909	65.364
	weighted annual mean	Down	11	57.955	53.918	44.5	43.545	42.191	42.532	40.245	39.4	37.091	43.473
SO ₂	arithmetic mean	NS	4	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.002	0.002
	2nd max 24-hour	NS	4	0.007	0.008	0.009	0.007	0.004	0.005	0.004	0.004	0.007	0.007
ROANOKE, VA													
NO ₂	arithmetic mean	NS	1	0.013	0.014	0.013	0.014	0.013	0.013	0.013	0.014	0.012	
O ₃	4th max 8-hour	Up	1	0.075	0.077	0.072	0.084	0.084	0.079	0.073	0.084	0.099	0.089
	2nd daily max 1-hour	NS	1	0.086	0.1	0.089	0.103	0.102	0.093	0.084	0.102	0.126	0.105
PM ₁₀	90th percentile	NS	2	58	50.5	47.5	56	55	54	58	51.5	48.5	48.5
	weighted annual mean	Down	2	36.45	32.5	31.65	34.85	35.55	34.35	33.05	29.85	29.2	29.9
SO ₂	arithmetic mean	NS	1	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.003	0.003	
	2nd max 24-hour	Down	1	0.018	0.019	0.016	0.018	0.011	0.01	0.014	0.013	0.009	0.01
ROCHESTER, MN													
PM ₁₀	90th percentile	Down	1	48	37	37	31	33	32	34	31	31	31
	weighted annual mean	NS	1	27.7	22.7	21.2	20.4	20.8	20.2	19.4	20	21.2	21.2

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
ROCHESTER, NY												
CO	2nd max 8-hour	NS	2	3.45	3.25	3.5	3.15	4.5	3.15	3.7	1.9	2.7
O ₃	4th max 8-hour	NS	2	0.087	0.098	0.076	0.078	0.079	0.093	0.069	0.085	0.081
PM ₁₀	2nd daily max 1-hour	NS	2	0.108	0.111	0.09	0.094	0.094	0.107	0.085	0.099	0.096
	90th percentile	NS	2	37.5	48.5	37.5	39.5	33	37	35	33	36
	weighted annual mean	Down	2	21.3	25.85	22.4	22.8	20.05	20.8	21.45	19.9	19.8
SO ₂	arithmetic mean	Down	2	0.012	0.011	0.011	0.01	0.011	0.01	0.009	0.008	0.009
	2nd max 24-hour	NS	2	0.04	0.043	0.039	0.041	0.043	0.038	0.033	0.038	0.053
ROCKFORD, IL												
CO	2nd max 8-hour	Down	1	6.5	5.1	4.6	4.3	4	4.5	3.2	3.7	3.6
Pb	max quarterly mean	NS	1	0.085	0.044	0.059	0.034	0.039	0.027	0.049	0.029	0.043
O ₃	4th max 8-hour	NS	2	0.068	0.077	0.082	0.067	0.079	0.085	0.078	0.072	0.072
PM ₁₀	2nd daily max 1-hour	NS	2	0.085	0.091	0.093	0.077	0.102	0.101	0.089	0.082	0.084
	90th percentile	NS	1	45	35	31	26	36	39	29	42	39
	weighted annual mean	NS	1	25.2	22.2	21.4	16.3	18.8	18.9	17.6	25.6	24.1
SACRAMENTO, CA												
CO	2nd max 8-hour	Down	7	7.786	7.2	5.486	5.657	5.471	4.586	4.271	3.929	3.957
Pb	max quarterly mean	Down	2	0.105	0.04	0.022	0.049	0.019	0.021	0.014	0.012	0.009
NO ₂	arithmetic mean	Down	3	0.02	0.017	0.018	0.018	0.016	0.017	0.017	0.015	0.016
O ₃	4th max 8-hour	NS	8	0.093	0.095	0.094	0.09	0.091	0.097	0.094	0.081	0.094
PM ₁₀	2nd daily max 1-hour	NS	8	0.13	0.128	0.124	0.116	0.113	0.128	0.116	0.101	0.126
	90th percentile	Down	3	54.333	54.333	42	38	37.667	47	33.667	31.333	31.333
	weighted annual mean	Down	3	31.233	31.233	27.633	22.667	23.8	22.9	20	20.167	18.8
SO ₂	arithmetic mean	NS	2	0.004	0.002	0.002	0.001	0.001	0.002	0.002	0.002	0.003
	2nd max 24-hour	NS	2	0.011	0.011	0.01	0.004	0.005	0.005	0.004	0.005	0.01
ST. JOSEPH, MO												
PM ₁₀	90th percentile	Down	1	71	79	70	56	62	67	52	57	47
	weighted annual mean	Down	1	40.2	44	38.6	31.5	33.7	33.3	32.4	31.4	25.8
ST. LOUIS, MO-IL												
CO	2nd max 8-hour	Down	8	4.25	4.313	3.45	3.538	3.763	3.313	3.425	3.238	3.4
Pb	max quarterly mean	Down	13	0.76	0.68	0.697	0.573	0.66	0.677	0.671	0.535	0.433
NO ₂	arithmetic mean	NS	9	0.018	0.018	0.019	0.018	0.019	0.019	0.019	0.018	0.019
O ₃	4th max 8-hour	NS	16	0.081	0.086	0.08	0.074	0.09	0.09	0.084	0.083	0.085
PM ₁₀	2nd daily max 1-hour	NS	16	0.108	0.108	0.1	0.108	0.117	0.116	0.108	0.108	0.115
	90th percentile	NS	15	54.467	48.2	50.533	46.333	49.533	51.467	42.533	44.8	48.6
	weighted annual mean	Down	15	32.96	31.807	32.047	28.187	31.12	30.773	27.327	27.553	30.033
SO ₂	arithmetic mean	Down	16	0.011	0.01	0.009	0.009	0.009	0.008	0.008	0.007	0.006
	2nd max 24-hour	Down	16	0.042	0.041	0.038	0.04	0.04	0.037	0.038	0.034	0.029
SALINAS, CA												
CO	2nd max 8-hour	Down	1	2.5	2.1	2.3	2.1	2	1.7	2.4	1.7	1.6
NO ₂	arithmetic mean	Down	1	0.012	0.012	0.012	0.012	0.012	0.011	0.011	0.01	0.01
O ₃	4th max 8-hour	NS	4	0.062	0.062	0.061	0.065	0.057	0.057	0.063	0.056	0.056
PM ₁₀	2nd daily max 1-hour	Down	4	0.08	0.078	0.075	0.083	0.08	0.071	0.079	0.071	0.07
	90th percentile	NS	2	40	37	33.5	33	29	37.75	35	32	30.5
	weighted annual mean	NS	2	23.45	23.9	21.45	19.7	18.15	19	19	20.85	17.35
SALT LAKE CITY-OGDEN, UT												
CO	2nd max 8-hour	Down	1	6.8	7.5	6.5	6.4	5.9	4.5	6.2	5.4	4.9
Pb	max quarterly mean	NS	2	0.083	0.079	0.049	0.07	0.049	0.051	0.028	0.07	0.063
NO ₂	arithmetic mean	NS	2	0.019	0.02	0.02	0.024	0.023	0.022	0.023	0.022	0.023
O ₃	4th max 8-hour	NS	2	0.08	0.079	0.074	0.079	0.081	0.083	0.085	0.077	0.094
PM ₁₀	2nd daily max 1-hour	NS	2	0.113	0.108	0.097	0.104	0.109	0.115	0.114	0.102	0.122
	90th percentile	Down	6	56.333	89	73.667	68.333	52.5	49.333	61	49	45.667
	weighted annual mean	Down	6	33.267	41.183	35.85	36.717	32.033	28.867	33.167	28.95	26.717
SO ₂	arithmetic mean	Down	3	0.009	0.01	0.009	0.007	0.004	0.003	0.003	0.003	0.003
	2nd max 24-hour	Down	3	0.039	0.051	0.046	0.043	0.013	0.013	0.014	0.008	0.008
SAN ANTONIO, TX												
CO	2nd max 8-hour	Down	1	5.2	5.2	5.2	5	3.3	4.3	4.5	4.4	4.6
O ₃	4th max 8-hour	NS	2	0.084	0.08	0.072	0.081	0.088	0.092	0.081	0.083	0.082
PM ₁₀	2nd daily max 1-hour	NS	2	0.1	0.105	0.096	0.11	0.105	0.117	0.118	0.102	0.1
	90th percentile	Down	1	47	42	46	38	39	35	28	32	32
	weighted annual mean	Down	1	28.3	29.1	28.6	22.7	23.4	22	19.7	20.7	20.7
SAN DIEGO, CA												
CO	2nd max 8-hour	Down	8	5.588	5.25	4.95	4.413	4.738	4.213	4.288	3.838	3.525
Pb	max quarterly mean	Down	3	0.094	0.044	0.03	0.033	0.016	0.025	0.019	0.019	0.013
NO ₂	arithmetic mean	Down	7	0.025	0.025	0.024	0.02	0.021	0.021	0.019	0.019	0.018
O ₃	4th max 8-hour	Down	9	0.105	0.099	0.094	0.09	0.082	0.082	0.083	0.078	0.079
PM ₁₀	2nd daily max 1-hour	Down	9	0.154	0.147	0.139	0.132	0.109	0.116	0.104	0.112	0.106
	90th percentile	Down	3	54.333	54	44	46	42	46	38	38	36
	weighted annual mean	Down	3	34.233	37.133	31.5	30.033	30.667	32.167	27.7	26.8	22.867
SO ₂	arithmetic mean	NS	3	0.004	0.003	0.004	0.002	0.003	0.003	0.004	0.003	0.003
	2nd max 24-hour	NS	3	0.015	0.017	0.017	0.009	0.013	0.012	0.015	0.012	0.011

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
SAN FRANCISCO, CA													
CO	2nd max 8-hour	Down	4	5.7	6.15	4.825	4.6	4.25	3.65	3.9	3.35	3.5	
Pb	max quarterly mean	Down	1	0.044	0.04	0.02	0.026	0.019	0.027	0.014	0.02	0.013	
NO ₂	arithmetic mean	Down	1	0.021	0.024	0.022	0.024	0.022	0.021	0.022	0.02	0.02	
O ₃	4th max 8-hour	NS	3	0.044	0.046	0.045	0.048	0.049	0.061	0.055	0.048	0.045	
	2nd daily max 1-hour	NS	3	0.06	0.063	0.063	0.083	0.072	0.094	0.082	0.074	0.063	
PM ₁₀	90th percentile	Down	1	59	66	56	39	47	34	32	33	34	
	weighted annual mean	Down	1	28.3	32.1	28.5	26.5	24.8	21	21.1	23.9	22.4	
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.003	0.002	0.001	0.002	0.002	0.002	0.002	
	2nd max 24-hour	NS	1	0.01	0.013	0.012	0.01	0.005	0.005	0.007	0.006	0.006	
SAN JOSE, CA													
CO	2nd max 8-hour	Down	2	10.75	10.15	7.25	6.4	7.35	5.6	5.65	5.35	6.05	
Pb	max quarterly mean	Down	2	0.075	0.037	0.029	0.023	0.017	0.016	0.013	0.011	0.013	0.013
O ₃	4th max 8-hour	NS	4	0.071	0.073	0.07	0.073	0.067	0.083	0.081	0.062	0.073	0.072
	2nd daily max 1-hour	NS	4	0.105	0.11	0.108	0.105	0.096	0.118	0.109	0.084	0.111	0.11
PM ₁₀	90th percentile	Down	4	72	63.75	54.75	45.5	46.75	38.5	30.75	31.75	33	
	weighted annual mean	Down	4	35.75	33.775	29.7	25.825	26.275	21.5	20.75	22.475	20.95	
SAN JUAN-BAYAMON, PR													
CO	2nd max 8-hour	Down	2	5.3	5.25	5.3	4.45	4.8	4.85	3.95	3.9	3.75	
PM ₁₀	90th percentile	NS	7	59.286	47.143	44.429	54.429	45.429	36.714	39.286	50.286	47.429	
	weighted annual mean	NS	7	33.429	29.157	27.714	31.443	28.886	25.071	26.486	30.4	28.043	
SO ₂	arithmetic mean	Down	2	0.007	0.01	0.009	0.008	0.008	0.006	0.005	0.004	0.003	
	2nd max 24-hour	Down	2	0.056	0.062	0.069	0.038	0.048	0.039	0.021	0.017	0.013	
SAN LUIS OBISPO-ATASCADERO-PASO ROBLES, CA													
CO	2nd max 8-hour	Down	1	3.9	3.3	3	3.1	3.1	2.4	2.3	2.3	2	
NO ₂	arithmetic mean	Down	3	0.013	0.013	0.012	0.012	0.012	0.011	0.011	0.011	0.011	
O ₃	4th max 8-hour	NS	5	0.069	0.066	0.065	0.064	0.064	0.064	0.069	0.062	0.067	
	2nd daily max 1-hour	NS	5	0.086	0.084	0.082	0.081	0.078	0.081	0.086	0.073	0.081	
PM ₁₀	90th percentile	Down	3	38	39.667	32	41.667	33	35.667	31.667	30.333	23.333	
	weighted annual mean	Down	3	23.133	24.367	21.233	22.4	21.167	21.2	18.333	19.967	15.433	
SO ₂	arithmetic mean	NS	1	0.002	0.001	0.001	0.001	0.002	0.002	0.002	0.001	0.001	
	2nd max 24-hour	NS	1	0.006	0.005	0.004	0.004	0.005	0.004	0.004	0.004	0.004	
SANTA BARBARA-SANTA MARIA-LOMPOC, CA													
CO	2nd max 8-hour	Down	4	2.35	2.325	2.25	2.15	2.5	2.1	1.85	1.625	1.675	
Pb	max quarterly mean	Down	1	0.032	0.027	0.012	0.015	0.01	0.009	0.007	0.008	0.008	
NO ₂	arithmetic mean	Down	15	0.007	0.007	0.007	0.006	0.007	0.006	0.006	0.006	0.006	
O ₃	4th max 8-hour	Down	16	0.079	0.074	0.079	0.076	0.073	0.074	0.079	0.069	0.064	
	2nd daily max 1-hour	Down	16	0.105	0.103	0.104	0.099	0.095	0.101	0.107	0.087	0.087	
PM ₁₀	90th percentile	NS	10	35.3	35.7	32.3	37.8	35.6	33.1	33.1	34.7	33.3	
	weighted annual mean	NS	10	23.17	22.17	21.5	22.58	22.96	21.71	20.96	22.5	21.12	
SO ₂	arithmetic mean	NS	11	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
	2nd max 24-hour	Down	11	0.003	0.003	0.003	0.004	0.003	0.004	0.003	0.002	0.002	
SANTA CRUZ-WATSONVILLE, CA													
CO	2nd max 8-hour	Down	1	1	1	1	1	1.2	0.8	0.7	0.7	0.8	
NO ₂	arithmetic mean	Down	1	0.008	0.01	0.007	0.006	0.006	0.005	0.005	0.004	0.005	
O ₃	4th max 8-hour	NS	1	0.06	0.055	0.061	0.061	0.053	0.051	0.049	0.051	0.049	
	2nd daily max 1-hour	NS	1	0.07	0.07	0.07	0.07	0.068	0.06	0.069	0.063	0.055	
SO ₂	arithmetic mean	NS	1	0.001	0.001	0.001	0.001	0.002	0.001	0.002	0.001	0.001	
	2nd max 24-hour	NS	1	0.003	0.002	0.006	0.006	0.006	0.008	0.003	0.002	0.003	
SANTA FE, NM													
CO	2nd max 8-hour	Down	1	3.5	3.9	3.7	3.4	2.7	2.3	2.2	2.1	2	
PM ₁₀	90th percentile	Down	2	23.5	21.5	23	22.5	21	18.5	21	19.5	20	
	weighted annual mean	Down	2	16.6	14.35	16.15	14.85	13.75	12.75	13.95	13.55	13.6	
SANTA ROSA, CA													
CO	2nd max 8-hour	Down	1	4.3	3.8	3.5	3.8	3.2	2.4	3	3.1	3.3	
NO ₂	arithmetic mean	NS	1	0.015	0.015	0.016	0.016	0.015	0.015	0.014	0.013	0.015	
O ₃	4th max 8-hour	up	2	0.056	0.059	0.057	0.061	0.06	0.065	0.062	0.064	0.063	
	2nd daily max 1-hour	up	2	0.075	0.08	0.075	0.085	0.085	0.089	0.08	0.089	0.084	
PM ₁₀	90th percentile	Down	3	37.333	46	33	33.667	28.333	28.667	26.667	23	23.333	
	weighted annual mean	Down	3	20.067	23.433	18.4	19.133	17.9	15.7	15.667	14.933	13.967	
SARASOTA-BRADENTON, FL													
CO	2nd max 8-hour	NS	1	6.2	6.9	5.6	6.5	5.3	5.9	5.1	5.3	5.6	
O ₃	4th max 8-hour	NS	3	0.077	0.074	0.077	0.075	0.079	0.077	0.073	0.077	0.084	
	2nd daily max 1-hour	NS	4	0.096	0.095	0.092	0.097	0.095	0.095	0.092	0.101	0.114	
PM ₁₀	90th percentile	Down	3	42.667	42.333	41.333	38.667	35	33.667	28.667	29.667	31.333	
	weighted annual mean	Down	3	27.967	25.1	26.533	26.533	22.867	21.367	20.033	20.533	20.967	
SO ₂	arithmetic mean	Down	1	0.002	0.003	0.003	0.003	0.002	0.002	0.002	0.002	0.002	
	2nd max 24-hour	NS	1	0.016	0.035	0.021	0.018	0.017	0.01	0.018	0.009	0.019	
SAVANNAH, GA													
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.002	0.003	0.003	0.004	0.004	0.003	0.003	
	2nd max 24-hour	NS	1	0.008	0.009	0.008	0.011	0.015	0.013	0.019	0.013	0.01	

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
SCRANTON—WILKES-BARRE—HAZLETON, PA													
CO	2nd max 8-hour	Down	2	4.5	4.15	3.75	2.9	3.55	2.8	3.8	3.05	2.5	2.15
NO ₂	arithmetic mean	Down	2	0.018	0.017	0.016	0.018	0.018	0.016	0.018	0.016	0.015	0.015
O ₃	4th max 8-hour	NS	4	0.091	0.098	0.081	0.088	0.081	0.088	0.081	0.087	0.087	0.092
	2nd daily max 1-hour	NS	4	0.106	0.118	0.095	0.11	0.098	0.105	0.103	0.101	0.103	0.109
PM ₁₀	90th percentile	Down	3	46	48.667	40.667	45.667	49	45	37.667	39	39	39
	weighted annual mean	NS	3	25.367	28.933	25.067	26.233	28.433	25.467	23.533	25.7	25.7	25.7
SO ₂	arithmetic mean	Down	2	0.01	0.009	0.008	0.007	0.007	0.005	0.006	0.007	0.006	0.006
	2nd max 24-hour	Down	2	0.049	0.039	0.033	0.026	0.035	0.036	0.028	0.029	0.024	0.022
SEATTLE-BELLEVUE-EVERETT, WA													
CO	2nd max 8-hour	Down	6	7.617	7.7	7.783	5.783	5.683	5.55	5.333	5.6	4.65	4.717
Pb	max quarterly mean	NS	1	0.641	0.561	0.4	0.368	0.607	0.513	0.658	0.874	2.033	0.046
O ₃	4th max 8-hour	NS	2	0.088	0.074	0.078	0.066	0.064	0.067	0.082	0.065	0.071	0.06
	2nd daily max 1-hour	NS	2	0.127	0.105	0.098	0.098	0.12	0.093	0.108	0.084	0.12	0.078
PM ₁₀	90th percentile	Down	8	48.75	49.75	47.875	50.125	38.25	37	32	36.75	31.625	30
	weighted annual mean	Down	8	28.55	29.3	28.838	27.613	22.513	21.725	20.288	22.025	18.675	18.888
SO ₂	arithmetic mean	Down	2	0.008	0.008	0.008	0.008	0.006	0.005	0.004	0.004	0.005	0.005
	2nd max 24-hour	Down	2	0.023	0.023	0.02	0.02	0.022	0.017	0.017	0.011	0.013	0.015
SHARON, PA													
Pb	max quarterly mean	Down	1	0.087	0.087	0.073	0.047	0.054	0.049	0.067	0.044	0.042	0.042
O ₃	4th max 8-hour	NS	1	0.087	0.093	0.088	0.083	0.09	0.095	0.09	0.092	0.106	0.091
	2nd daily max 1-hour	NS	1	0.103	0.107	0.1	0.105	0.111	0.113	0.103	0.111	0.121	0.108
PM ₁₀	90th percentile	Down	1	52	59	42	47	51	49	37	42	42	42
	weighted annual mean	NS	1	29.9	36	26.6	28.1	29.8	27.7	29	28.2	28.2	28.2
SO ₂	arithmetic mean	Down	1	0.01	0.009	0.008	0.008	0.008	0.008	0.007	0.007	0.007	0.007
	2nd max 24-hour	NS	1	0.036	0.032	0.03	0.029	0.047	0.032	0.029	0.032	0.029	0.039
SHREVEPORT-BOSSIER CITY, LA													
O ₃	4th max 8-hour	NS	2	0.088	0.081	0.083	0.088	0.08	0.081	0.079	0.084	0.089	0.091
	2nd daily max 1-hour	NS	2	0.112	0.1	0.1	0.113	0.094	0.097	0.098	0.101	0.109	0.104
PM ₁₀	90th percentile	NS	1	33	48	36	37	36	43	29	35	35	35
	weighted annual mean	NS	1	23.3	28.4	23.8	21.8	23.6	23.7	21.9	22.5	22.5	22.5
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.004	0.004	0.002	0.001	0.002	0.002	0.002	0.002
	2nd max 24-hour	NS	1	0.006	0.009	0.013	0.011	0.008	0.004	0.004	0.007	0.01	0.006
SIOUX CITY, IA-NE													
PM ₁₀	90th percentile	NS	1	46	51	45	40	38	55	72	54	45	48
	weighted annual mean	NS	1	27.7	27.9	25.4	22.5	23.3	26.4	32.5	28.3	28	27.9
SIOUX FALLS, SD													
PM ₁₀	90th percentile	NS	2	41.5	39.5	39.5	27.5	38.5	39.5	31.5	35	35	35.5
	weighted annual mean	NS	2	23.2	22.6	22.8	17	22.7	21.65	20.55	21.2	21.6	21.6
SOUTH BEND, IN													
O ₃	4th max 8-hour	NS	3	0.082	0.086	0.081	0.076	0.086	0.094	0.09	0.089	0.091	0.088
	2nd daily max 1-hour	up	3	0.097	0.1	0.094	0.09	0.099	0.112	0.107	0.11	0.115	0.102
PM ₁₀	90th percentile	Down	2	52.5	49	38	36	39	42	34.5	29.5	36.5	34
	weighted annual mean	Down	2	30.8	29.65	23.05	23.75	27.1	21.7	20.1	17.2	20.65	20.3
SPOKANE, WA													
CO	2nd max 8-hour	Down	3	9.1	9.333	8.133	8	6.4	6.933	6.833	5.133	5.133	4.567
O ₃	4th max 8-hour	up	1	0.057	0.061	0.063	0.06	0.068	0.065	0.067	0.068	0.07	0.065
	2nd daily max 1-hour	NS	1	0.071	0.077	0.083	0.069	0.085	0.08	0.079	0.083	0.082	0.073
PM ₁₀	90th percentile	Down	4	62.5	58.5	57	60.75	52	44	43.5	40.75	43	41.75
	weighted annual mean	Down	4	37.125	33.1	34.125	32.15	30.375	24.45	26.65	24.45	24.525	23.7
SPRINGFIELD, IL													
CO	2nd max 8-hour	Down	1	4.4	4.3	4.5	3.9	3.1	3.2	3	2.1	1.9	2.4
O ₃	4th max 8-hour	Down	1	0.081	0.083	0.077	0.081	0.081	0.08	0.079	0.071	0.078	0.075
	2nd daily max 1-hour	NS	1	0.098	0.102	0.091	0.106	0.101	0.1	0.098	0.085	0.093	0.099
SO ₂	arithmetic mean	NS	1	0.007	0.008	0.006	0.006	0.006	0.006	0.006	0.006	0.007	0.006
	2nd max 24-hour	NS	1	0.054	0.048	0.043	0.04	0.05	0.062	0.061	0.043	0.061	0.059
SPRINGFIELD, MO													
CO	2nd max 8-hour	Down	1	7.2	6.9	6.2	5.3	5.9	4.1	3.3	4.6	4	3.1
NO ₂	arithmetic mean	up	1	0.008	0.008	0.01	0.011	0.013	0.012	0.011	0.011	0.012	0.013
O ₃	4th max 8-hour	up	2	0.058	0.063	0.058	0.069	0.072	0.079	0.074	0.066	0.071	0.078
	2nd daily max 1-hour	up	2	0.075	0.073	0.085	0.075	0.093	0.098	0.086	0.08	0.09	0.094
PM ₁₀	90th percentile	NS	3	36.333	27.333	30	29.667	28	27.667	26	24	30.667	30.333
	weighted annual mean	NS	3	21.6	18.233	18.933	17.4	17.4	16.633	17.9	15.7	17.967	17.967
SO ₂	arithmetic mean	NS	2	0.006	0.003	0.004	0.006	0.008	0.003	0.005	0.002	0.004	0.004
	2nd max 24-hour	NS	2	0.057	0.033	0.034	0.04	0.067	0.021	0.044	0.022	0.021	0.021
SPRINGFIELD, MA													
CO	2nd max 8-hour	NS	2	6.7	6.3	7.1	6.1	7.5	7.9	7.1	5.1	4.1	4.8
NO ₂	arithmetic mean	Down	2	0.018	0.017	0.016	0.016	0.019	0.015	0.016	0.015	0.013	0.014
O ₃	4th max 8-hour	NS	4	0.093	0.097	0.09	0.095	0.093	0.092	0.083	0.094	0.087	0.087
	2nd daily max 1-hour	NS	4	0.121	0.126	0.117	0.129	0.125	0.124	0.104	0.122	0.109	0.108
PM ₁₀	90th percentile	NS	5	39.2	42.2	34.4	39.6	40.4	36.2	35.4	34.2	38.8	38.4
	weighted annual mean	NS	5	23.06	23.4	21.5	22.2	24.44	20.7	22.22	22.08	21.28	23.4
SO ₂	arithmetic mean	Down	3	0.008	0.008	0.007	0.006	0.006	0.005	0.005	0.005	0.005	0.005
	2nd max 24-hour	Down	3	0.033	0.031	0.034	0.023	0.048	0.023	0.024	0.021	0.02	0.02

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
STAMFORD-NORWALK, CT												
CO	2nd max 8-hour	Down	1	6.3	6	5.5	5.2	6.2	5.4	4.1	5.1	3.8
O ₃	4th max 8-hour	NS	1	0.108	0.11	0.082	0.101	0.107	0.102	0.093	0.101	0.089
PM ₁₀	2nd daily max 1-hour	NS	1	0.144	0.147	0.111	0.145	0.155	0.136	0.121	0.142	0.113
	90th percentile	NS	3	48.667	51	36.667	35	50	41.333	39.333	39.333	35.333
	weighted annual mean	NS	3	30.1	32	24.067	23.3	28.133	24.733	24.5	25.733	23.833
SO ₂	arithmetic mean	Down	1	0.005	0.006	0.005	0.005	0.006	0.004	0.005	0.004	0.004
	2nd max 24-hour	NS	1	0.024	0.025	0.022	0.02	0.028	0.023	0.019	0.025	0.025
STEUBENVILLE-WEIRTON, OH-WV												
CO	2nd max 8-hour	Down	3	11.467	9.267	6.933	7.233	8.667	5.867	5	4.8	6.7
Pb	max quarterly mean	Down	2	0.065	0.083	0.148	0.067	0.082	0.055	0.05	0.029	0.029
NO ₂	arithmetic mean	NS	1	0.02	0.021	0.019	0.017	0.02	0.02	0.02	0.017	0.017
O ₃	4th max 8-hour	NS	2	0.075	0.091	0.076	0.081	0.083	0.094	0.08	0.081	0.083
PM ₁₀	2nd daily max 1-hour	NS	2	0.092	0.114	0.089	0.101	0.103	0.112	0.097	0.093	0.094
	90th percentile	Down	9	67.778	69.556	63.889	62.111	65.667	60.556	55.222	48.667	53.778
	weighted annual mean	Down	9	24.544	26.6	23.822	22.778	23.133	22.756	21.133	18.3	19.322
SO ₂	arithmetic mean	Down	7	0.024	0.022	0.018	0.019	0.017	0.011	0.011	0.011	0.011
	2nd max 24-hour	NS	7	0.085	0.08	0.076	0.083	0.088	0.047	0.048	0.051	0.047
STOCKTON-LODI, CA												
CO	2nd max 8-hour	Down	2	10.85	9.65	5.85	5.8	6.95	4.8	6	3.65	5.25
Pb	max quarterly mean	Down	1	0.042	0.039	0.024	0.026	0.016	0.015	0.023	0.014	0.014
NO ₂	arithmetic mean	NS	1	0.026	0.025	0.024	0.024	0.024	0.022	0.023	0.022	0.023
O ₃	4th max 8-hour	NS	2	0.086	0.087	0.085	0.083	0.086	0.087	0.079	0.073	0.085
PM ₁₀	2nd daily max 1-hour	NS	2	0.115	0.11	0.11	0.11	0.12	0.125	0.101	0.094	0.108
	90th percentile	Down	2	75.5	93.5	60	74.5	59	51	37.5	45.5	54.5
	weighted annual mean	Down	2	45.25	48.6	39.35	36.35	35	31.25	26.05	28.7	28.05
SYRACUSE, NY												
CO	2nd max 8-hour	Down	1	6.8	8.4	7.5	5.6	6.5	3.3	3.9	4	3
O ₃	4th max 8-hour	NS	2	0.092	0.092	0.083	0.083	0.077	0.086	0.073	0.077	0.082
	2nd daily max 1-hour	Down	2	0.103	0.103	0.096	0.097	0.095	0.1	0.085	0.096	0.093
PM ₁₀	90th percentile	NS	2	48.5	50.5	46.5	41	40.5	35.5	32	38	42
	weighted annual mean	NS	2	28.05	29.25	27.25	24.05	22.05	21	22.05	21.65	24.15
SO ₂	arithmetic mean	NS	2	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.002	0.002
	2nd max 24-hour	NS	2	0.014	0.014	0.012	0.018	0.02	0.016	0.014	0.017	0.01
TACOMA, WA												
CO	2nd max 8-hour	NS	1	8	8.7	8.9	5.9	6	6.3	6.3	6.8	5.8
O ₃	4th max 8-hour	NS	1	0.087	0.077	0.081	0.068	0.073	0.074	0.077	0.066	0.085
	2nd daily max 1-hour	NS	1	0.127	0.094	0.097	0.1	0.112	0.089	0.097	0.083	0.126
PM ₁₀	90th percentile	Down	4	55.75	52.25	54.5	50.75	39.75	38.5	40.25	45	32.75
	weighted annual mean	Down	4	30.575	31.025	32.6	28.025	23.125	22.7	21.95	23.35	18.65
SO ₂	arithmetic mean	Down	2	0.008	0.008	0.009	0.009	0.007	0.006	0.006	0.006	0.005
	2nd max 24-hour	Down	2	0.026	0.023	0.03	0.025	0.021	0.02	0.024	0.023	0.019
TAMPA-ST. PETERSBURG-CLEARWATER, FL												
CO	2nd max 8-hour	Down	6	3.817	2.85	2.867	2.583	2.2	2.75	2.533	2.4	2.467
Pb	max quarterly mean	Down	3	0.763	0.756	0.45	0.23	0.296	0.254	0.246	0.214	0.175
NO ₂	arithmetic mean	NS	2	0.013	0.012	0.011	0.011	0.01	0.011	0.011	0.011	0.013
O ₃	4th max 8-hour	up	7	0.08	0.07	0.074	0.071	0.075	0.074	0.074	0.08	0.089
	2nd daily max 1-hour	NS	7	0.106	0.097	0.094	0.091	0.093	0.096	0.098	0.099	0.111
PM ₁₀	90th percentile	NS	5	40.2	41.4	41.6	39	39	38	40.4	42.6	40.4
	weighted annual mean	NS	5	27.26	27.74	26.72	27.52	25.96	25.28	26.86	27.44	27.4
SO ₂	arithmetic mean	NS	8	0.006	0.005	0.005	0.005	0.005	0.004	0.005	0.005	0.005
	2nd max 24-hour	Down	8	0.03	0.029	0.027	0.029	0.031	0.025	0.024	0.026	0.027
TERRE HAUTE, IN												
O ₃	4th max 8-hour	NS	1	0.087	0.088	0.069	0.074	0.094	0.085	0.098	0.083	0.084
	2nd daily max 1-hour	NS	1	0.105	0.1	0.081	0.088	0.106	0.099	0.112	0.096	0.099
PM ₁₀	90th percentile	Down	5	54.8	50	43.4	45	40.2	48.2	36.6	39	37.8
	weighted annual mean	Down	5	32.82	29.58	26.08	25.48	25.14	26.86	22.24	23.12	23.36
SO ₂	arithmetic mean	NS	2	0.011	0.011	0.007	0.009	0.01	0.007	0.009	0.006	0.007
	2nd max 24-hour	Down	2	0.038	0.037	0.033	0.039	0.039	0.029	0.033	0.023	0.027
TEXARKANA, TX-TEXARKANA, AR												
PM ₁₀	90th percentile	NS	1	36	39	37	35	36	45	39	34	34
	weighted annual mean	NS	1	24.3	22.4	23.3	21.9	22.9	25.7	23.4	22.4	22.4
TOLEDO, OH												
O ₃	4th max 8-hour	NS	3	0.085	0.086	0.079	0.083	0.088	0.088	0.09	0.083	0.083
	2nd daily max 1-hour	NS	3	0.1	0.108	0.091	0.108	0.109	0.107	0.108	0.099	0.1
SO ₂	arithmetic mean	NS	2	0.006	0.006	0.006	0.007	0.007	0.004	0.004	0.004	0.007
	2nd max 24-hour	NS	2	0.033	0.022	0.029	0.028	0.047	0.025	0.032	0.019	0.019
TOPEKA, KS												
Pb	max quarterly mean	Down	3	0.012	0.011	0.009	0.009	0.008	0.009	0.009	0.008	0.008
PM ₁₀	90th percentile	NS	1	58	39	47	40	46	54	41	44	44
	weighted annual mean	NS	1	32.5	25.5	28.3	27.1	29.2	34.1	27.1	28	28

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
TRENTON, NJ												
O ₃	4th max 8-hour	NS	1	0.105	0.122	0.11	0.102	0.103	0.107	0.09	0.106	0.095
	2nd daily max 1-hour	Down	1	0.142	0.153	0.151	0.135	0.14	0.132	0.121	0.126	0.113
PM ₁₀	90th percentile	Down	1	51	50	43	43	52	38	40	40	35
	weighted annual mean	Down	1	29.2	31.1	25.6	26.6	29.1	23.9	26.7	27	23.9
TUSCON, AZ												
CO	2nd max 8-hour	Down	4	4.55	4.5	4.725	4.638	4.575	4.375	4.075	3.7	3.325
NO ₂	arithmetic mean	NS	1	0.019	0.018	0.016	0.018	0.019	0.019	0.018	0.018	0.017
O ₃	4th max 8-hour	NS	5	0.073	0.072	0.07	0.075	0.073	0.077	0.073	0.071	0.069
	2nd daily max 1-hour	NS	5	0.093	0.084	0.087	0.09	0.088	0.094	0.086	0.085	0.088
PM ₁₀	90th percentile	NS	10	49.8	38.8	36.4	32.8	32.7	40.9	36.1	38.3	39.4
	weighted annual mean	NS	10	32.55	25.91	24.05	22.26	22.12	26.22	25.35	25.79	25.88
SO ₂	arithmetic mean	NS	1	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002	0.002
	2nd max 24-hour	Down	1	0.007	0.007	0.006	0.005	0.004	0.004	0.004	0.004	0.005
TULSA, OK												
CO	2nd max 8-hour	NS	2	4.7	4.6	5.1	3.85	3.85	3.35	5.25	5.65	3.9
Pb	max quarterly mean	Down	1	0.108	0.214	0.102	0.203	0.098	0.091	0.114	0.015	0.015
NO ₂	arithmetic mean	NS	2	0.011	0.013	0.013	0.013	0.013	0.01	0.012	0.012	0.014
O ₃	4th max 8-hour	NS	3	0.09	0.086	0.077	0.075	0.086	0.095	0.086	0.08	0.089
	2nd daily max 1-hour	NS	3	0.116	0.111	0.095	0.108	0.111	0.119	0.11	0.106	0.11
PM ₁₀	90th percentile	NS	5	42	41.4	38.6	40	42	44.2	40	37.8	37.8
	weighted annual mean	NS	5	23.9	25.02	23.52	25.9	25.58	26.24	26.22	24.18	24.18
SO ₂	arithmetic mean	NS	1	0.012	0.01	0.011	0.006	0.004	0.008	0.008	0.008	0.01
	2nd max 24-hour	NS	1	0.056	0.047	0.053	0.026	0.025	0.034	0.042	0.028	0.034
TUSCALOOSA, AL												
PM ₁₀	90th percentile	NS	1	61	47	38	43	41	48	41	41	44
	weighted annual mean	NS	1	31.8	27.5	26	26	25.9	27.4	26.2	25.2	28.3
UTICA-ROME, NY												
O ₃	4th max 8-hour	NS	2	0.08	0.082	0.078	0.067	0.072	0.077	0.063	0.073	0.073
	2nd daily max 1-hour	NS	2	0.097	0.096	0.092	0.085	0.085	0.092	0.075	0.085	0.088
PM ₁₀	90th percentile	Down	2	35	35	32	30	28.5	26	27.5	26	29.5
	weighted annual mean	NS	2	20.65	20.65	18.9	16.3	16.25	15.05	15.95	15.1	16.6
SO ₂	arithmetic mean	NS	1	0.001	0.001	0.001	0.002	0.002	0.002	0.002	0.002	0.001
	2nd max 24-hour	NS	1	0.006	0.006	0.006	0.012	0.012	0.008	0.009	0.006	0.005
VALLEJO-FAIRFIELD-NAPA, CA												
CO	2nd max 8-hour	Down	2	6.85	6.6	5.55	5.55	5.2	4.2	4.15	4.4	4.2
O ₃	4th max 8-hour	NS	3	0.067	0.067	0.065	0.071	0.068	0.079	0.074	0.06	0.071
	2nd daily max 1-hour	NS	3	0.093	0.103	0.093	0.1	0.096	0.108	0.104	0.082	0.106
PM ₁₀	90th percentile	Down	1	53	69	48	36	32	32	25	22	33
	weighted annual mean	Down	1	26.6	40.6	24.4	22.5	21.2	19	17.3	16.1	17.2
VENTURA, CA												
CO	2nd max 8-hour	Down	2	3.25	3.05	2.3	2.45	2.75	3.15	2.35	2.35	2.25
Pb	max quarterly mean	Down	1	0.02	0.032	0.014	0.01	0.01	0.01	0.008	0.008	0.006
NO ₂	arithmetic mean	Down	4	0.016	0.015	0.014	0.014	0.014	0.014	0.013	0.012	0.011
O ₃	4th max 8-hour	Down	6	0.098	0.104	0.099	0.089	0.095	0.095	0.099	0.085	0.087
	2nd daily max 1-hour	Down	6	0.128	0.136	0.128	0.123	0.126	0.126	0.127	0.11	0.116
PM ₁₀	90th percentile	Down	5	55.8	55.6	48.6	46.8	46.6	48.6	43.8	48.2	40.6
	weighted annual mean	Down	5	34.44	35.9	31.2	27.36	30.02	28.12	27.52	30.22	23.24
VICTORIA, TX												
O ₃	4th max 8-hour	NS	1	0.058	0.086	0.078	0.081	0.075	0.087	0.071	0.078	0.073
	2nd daily max 1-hour	NS	1	0.099	0.099	0.099	0.098	0.094	0.104	0.087	0.092	0.093
VINELAND-MILLVILLE-BRIDGETON, NJ												
O ₃	4th max 8-hour	NS	1	0.11	0.107	0.087	0.103	0.086	0.091	0.086	0.104	0.098
	2nd daily max 1-hour	NS	1	0.125	0.124	0.103	0.121	0.102	0.126	0.105	0.115	0.117
SO ₂	arithmetic mean	Down	1	0.007	0.007	0.006	0.006	0.005	0.004	0.005	0.004	0.004
	2nd max 24-hour	Down	1	0.024	0.023	0.021	0.019	0.032	0.016	0.016	0.018	0.012
VISALIA-TULARE-PORTERVILLE, CA												
CO	2nd max 8-hour	Down	1	5	5.3	4.3	3.5	4	4.2	3.9	3.5	3.6
NO ₂	arithmetic mean	NS	1	0.021	0.022	0.02	0.023	0.023	0.023	0.018	0.019	0.017
O ₃	4th max 8-hour	NS	2	0.099	0.098	0.1	0.107	0.108	0.1	0.104	0.096	0.102
	2nd daily max 1-hour	NS	2	0.116	0.116	0.125	0.138	0.137	0.118	0.131	0.114	0.116
PM ₁₀	90th percentile	Down	2	128.5	106.5	82.5	89.5	62.5	72	70	63	63.5
	weighted annual mean	Down	2	68.5	61	50.75	48.7	42.1	44.3	40.25	40.4	38.3
WASHINGTON, DC-MD-VA-WV												
CO	2nd max 8-hour	Down	8	4.7	4.6	4.088	4.675	4.15	4.163	3.725	3.788	3.113
Pb	max quarterly mean	Down	5	0.049	0.032	0.019	0.019	0.019	0.021	0.013	0.01	0.013
NO ₂	arithmetic mean	Down	7	0.024	0.024	0.024	0.024	0.023	0.021	0.021	0.021	0.021
O ₃	4th max 8-hour	NS	13	0.089	0.097	0.086	0.096	0.088	0.095	0.083	0.091	0.099
	2nd daily max 1-hour	NS	13	0.114	0.122	0.107	0.12	0.116	0.12	0.106	0.116	0.119
PM ₁₀	90th percentile	Down	14	40.857	40.214	36.286	37.214	38.786	36.214	33.5	33.071	35.5
	weighted annual mean	Down	14	25.45	25.55	23.086	22.35	21.236	21.707	20.336	20.207	20.893
SO ₂	arithmetic mean	Down	5	0.007	0.007	0.008	0.008	0.007	0.006	0.007	0.007	0.007
	2nd max 24-hour	NS	5	0.026	0.026	0.029	0.026	0.029	0.019	0.031	0.022	0.02

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area	Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
WATERBURY, CT												
PM ₁₀	90th percentile weighted annual mean	Down	2	56.5	48.5	43.5	44.5	43	40	46.5	37.5	32.5
SO ₂	arithmetic mean 2nd max 24-hour	Down	2	34	29.7	23.15	23.55	26.15	24.1	25.95	23.65	22
		Down	1	0.01	0.009	0.007	0.006	0.007	0.005	0.005	0.005	0.005
		Down	1	0.042	0.038	0.029	0.021	0.03	0.019	0.022	0.02	0.021
WATERLOO-CEDAR FALLS, IA												
PM ₁₀	90th percentile weighted annual mean	Down	1	57	57	63	48	45	52	48	47	47
SO ₂		Down	1	34.7	34.7	34.3	31.2	28.7	35.5	31.8	31.3	29.9
WAUSAU, WI												
O ₃	4th max 8-hour	NS	1	0.081	0.081	0.081	0.06	0.064	0.075	0.07	0.069	0.077
	2nd daily max 1-hour	NS	1	0.086	0.086	0.086	0.081	0.077	0.088	0.079	0.08	0.098
SO ₂	arithmetic mean 2nd max 24-hour	Down	1	0.004	0.004	0.004	0.004	0.004	0.003	0.003	0.002	0.003
		NS	1	0.03	0.03	0.024	0.039	0.024	0.022	0.015	0.013	0.031
WEST PALM BEACH-BOCA RATON, FL												
CO	2nd max 8-hour	NS	1	2.7	3.1	3.7	3.1	2.8	2.8	2.5	3.6	2.5
NO ₂	arithmetic mean	NS	1	0.014	0.012	0.011	0.013	0.012	0.012	0.012	0.012	0.013
O ₃	4th max 8-hour	NS	2	0.066	0.062	0.048	0.077	0.071	0.064	0.064	0.064	0.061
	2nd daily max 1-hour	NS	2	0.092	0.081	0.067	0.117	0.084	0.082	0.088	0.082	0.086
PM ₁₀	90th percentile weighted annual mean	NS	2	27	27.5	30	29	24.5	24.5	27.5	29	31
SO ₂	arithmetic mean 2nd max 24-hour	Down	1	18.95	18.45	19.9	18.85	18.1	17.6	18.45	19.8	20.35
		NS	1	0.002	0.002	0.003	0.004	0.003	0.002	0.002	0.002	0.001
			1	0.007	0.012	0.01	0.028	0.016	0.019	0.014	0.013	0.013
WHEELING, WV-OH												
CO	2nd max 8-hour	Down	1	7.1	5.6	5.6	4.1	4.6	5	3.5	3.1	3.5
O ₃	4th max 8-hour	NS	1	0.08	0.089	0.075	0.077	0.078	0.089	0.087	0.082	0.087
	2nd daily max 1-hour	NS	1	0.111	0.108	0.096	0.11	0.095	0.104	0.105	0.11	0.104
PM ₁₀	90th percentile weighted annual mean	Down	2	50	52.5	51.5	51	49	45.5	42	40.5	46
SO ₂	arithmetic mean 2nd max 24-hour	Down	2	29.5	30.65	30.4	29.35	27.7	28.25	27.6	23.75	24.9
		Down	3	0.02	0.02	0.018	0.018	0.015	0.01	0.011	0.01	0.011
		Down	3	0.064	0.074	0.077	0.075	0.065	0.055	0.058	0.043	0.045
WICHITA, KS												
CO	2nd max 8-hour	Down	3	5.933	5.917	5.633	5	4.933	5.233	5.8	4.8	4.833
Pb	max quarterly mean	Down	5	0.017	0.02	0.012	0.014	0.008	0.01	0.011	0.009	0.009
O ₃	4th max 8-hour	NS	2	0.079	0.076	0.067	0.06	0.07	0.073	0.071	0.079	0.081
	2nd daily max 1-hour	NS	2	0.095	0.09	0.078	0.075	0.085	0.095	0.093	0.093	0.093
PM ₁₀	90th percentile weighted annual mean	NS	4	48.75	51	52.5	55.5	49.75	50.75	42.5	40	40.5
		Down	4	27.7	31.35	32.25	31.425	26.4	27.1	24.85	22.45	24.2
WILLIAMSPORT, PA												
O ₃	4th max 8-hour	NS	1	0.071	0.081	0.073	0.075	0.069	0.073	0.07	0.076	0.073
	2nd daily max 1-hour	NS	1	0.088	0.101	0.092	0.088	0.079	0.091	0.082	0.086	0.097
PM ₁₀	90th percentile weighted annual mean	NS	1	50	60	36	47	52	49	36	40	40
SO ₂	arithmetic mean 2nd max 24-hour	NS	1	26	30.7	23.8	23.9	27.8	27.6	25.1	25.6	25.6
		NS	1	0.006	0.007	0.007	0.006	0.006	0.006	0.006	0.008	0.005
		NS	1	0.025	0.025	0.029	0.025	0.042	0.027	0.028	0.028	0.021
WILMINGTON-NEWARK, DE-MD												
CO	2nd max 8-hour	NS	1	5.4	4	4.1	3.8	4.3	4.6	3.6	4.5	3.1
NO ₂	arithmetic mean	NS	1	0.017	0.017	0.017	0.019	0.019	0.017	0.019	0.018	0.016
O ₃	4th max 8-hour	NS	3	0.098	0.1	0.094	0.101	0.094	0.112	0.088	0.104	0.095
	2nd daily max 1-hour	NS	3	0.123	0.121	0.118	0.141	0.119	0.142	0.111	0.136	0.122
PM ₁₀	90th percentile weighted annual mean	Down	2	47.5	44.75	39	42.5	52	44.5	41.5	42.5	40.5
SO ₂	arithmetic mean 2nd max 24-hour	Down	2	30.05	27.65	24.45	24.8	29.45	27.8	25.4	25.4	24
		Down	3	0.014	0.013	0.014	0.013	0.012	0.011	0.01	0.008	0.008
		Down	3	0.053	0.046	0.054	0.047	0.048	0.057	0.045	0.041	0.032
WORCESTER, MA-CT												
CO	2nd max 8-hour	Down	1	6	7.2	8	6.1	5.9	4.2	5.3	3.4	3.3
NO ₂	arithmetic mean	Down	1	0.022	0.023	0.024	0.028	0.025	0.021	0.019	0.019	0.02
O ₃	4th max 8-hour	NS	1	0.097	0.097	0.097	0.092	0.097	0.096	0.074	0.092	0.097
	2nd daily max 1-hour	Down	1	0.125	0.125	0.125	0.155	0.125	0.118	0.091	0.106	0.124
PM ₁₀	90th percentile weighted annual mean	Down	2	41	37.667	34.333	37	36	31.5	33.5	31.5	32.5
SO ₂	arithmetic mean 2nd max 24-hour	Down	1	22.95	21.267	19.583	19.5	19.9	19.45	20.25	19.55	19.2
		Down	1	0.008	0.009	0.007	0.007	0.008	0.006	0.005	0.004	0.005
		Down	1	0.034	0.029	0.033	0.025	0.024	0.023	0.021	0.021	0.017
YAKIMA, WA												
PM ₁₀	90th percentile weighted annual mean	Down	2	61.5	80.5	59.5	63	54.5	45.5	58.5	59	42.5
SO ₂		Down	2	33.1	40.15	32.45	34.85	29.1	23.55	30.375	31.6	25.75
YOLO, CA												
O ₃	4th max 8-hour	NS	1	0.082	0.073	0.085	0.076	0.076	0.083	0.087	0.068	0.087
	2nd daily max 1-hour	NS	1	0.1	0.105	0.11	0.09	0.097	0.108	0.113	0.092	0.109
PM ₁₀	90th percentile weighted annual mean	Down	1	81	81	63	62	46	61	40	37	42
		Down	1	46.4	46.4	34.7	29.2	29.8	30.1	24.3	24.6	21.7

Table A-16. Metropolitan Statistical Area Air Quality Trends, 1990–1999 (continued)

Metropolitan Statistical Area		Trend	#Trend Sites	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
YORK, PA													
CO	2nd max 8-hour	Down	1	4.4	3.7	3.6	3.3	3.9	2.7	2.8	3.4	2.4	2.4
Pb	max quarterly mean	NS	1	0.051	0.051	0.046	0.044	0.042	0.04	0.065	0.044	0.049	0.049
NO ₂	arithmetic mean	Down	1	0.022	0.021	0.02	0.022	0.024	0.021	0.021	0.019	0.019	0.019
O ₃	4th max 8-hour	NS	1	0.097	0.1	0.079	0.09	0.082	0.086	0.081	0.094	0.095	0.094
	2nd daily max 1-hour	NS	1	0.121	0.114	0.101	0.112	0.115	0.097	0.098	0.109	0.112	0.121
PM ₁₀	90th percentile	NS	1	56	60	44	52	51	56	46	49	49	49
	weighted annual mean	NS	1	29.7	32.2	27	30.5	31.7	29.7	28.4	31.2	31.2	31.2
SO ₂	arithmetic mean	NS	1	0.007	0.008	0.007	0.008	0.009	0.006	0.007	0.009	0.008	0.007
	2nd max 24-hour	NS	1	0.023	0.02	0.034	0.032	0.041	0.02	0.022	0.026	0.023	0.019
YOUNGSTOWN-WARREN, OH													
O ₃	4th max 8-hour	NS	3	0.09	0.096	0.092	0.085	0.083	0.096	0.09	0.089	0.099	0.094
	2nd daily max 1-hour	NS	3	0.105	0.111	0.106	0.106	0.096	0.11	0.104	0.105	0.115	0.108
PM ₁₀	90th percentile	Down	9	53	54.889	48.556	49.333	49	48.222	39.333	42.778	46.667	44
	weighted annual mean	Down	9	31.267	33.022	28.544	27.389	29.033	28.089	26.011	25.389	27.267	25.867
SO ₂	arithmetic mean	Down	2	0.016	0.016	0.013	0.011	0.011	0.01	0.009	0.008	0.008	0.008
	2nd max 24-hour	Down	2	0.053	0.048	0.056	0.064	0.051	0.038	0.044	0.037	0.03	0.034
YUBA CITY, CA													
CO	2nd max 8-hour	Down	1	5.8	5.8	5.8	5	5.6	4.1	4.1	3.9	3.9	4.2
NO ₂	arithmetic mean	Down	1	0.017	0.017	0.017	0.018	0.016	0.014	0.012	0.014	0.013	0.014
O ₃	4th max 8-hour	NS	2	0.076	0.079	0.088	0.081	0.082	0.087	0.086	0.073	0.087	0.084
	2nd daily max 1-hour	NS	2	0.1	0.1	0.11	0.11	0.099	0.107	0.105	0.093	0.103	0.105
PM ₁₀	90th percentile	NS	1	60	73	57	59	51	68	50	48	44	68
	weighted annual mean	Down	1	38.5	38.5	34.3	30.4	34.1	32.5	29.2	28.6	23.1	38.4

CO = Highest second maximum non-overlapping 8-hour concentration (*Applicable NAAQS is 9 ppm*)Pb = Highest quarterly maximum concentration (*Applicable NAAQS is 1.5 µg/m³*)NO₂ = Highest arithmetic mean concentration (*Applicable NAAQS is 0.053 ppm*)O₃ (1-hr) = Highest second daily maximum 1-hour concentration (*Applicable NAAQS is 0.12 ppm*)O₃ (8-hr) = Highest fourth daily maximum 8-hour concentration (*Applicable NAAQS is 0.08 ppm*)PM₁₀ = Highest second maximum 24-hour concentration (*Applicable NAAQS is 150 µg/m³*)SO₂ = Highest second maximum 24-hour concentration (*Applicable NAAQS is 0.14 ppm*)

ppm = Units are parts per million

µg/m³ = Units are micrograms per cubic meter